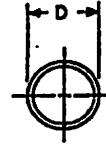
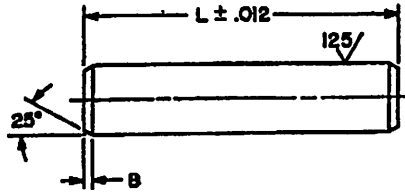


FED. SUP CLASS
5315

B, RADIUS
OPTIONAL
DESIGN



REVIEWER: AV, ME, WC, NC
USAR: AV, ME, OL, MC

D DIA	NOM	1/16		3/32		1/8		5/32		3/16	
	MAX	.0628		.0940		.1255		.1567		.1880	
	MIN	.0623		.0934		.1245		.1557		.1870	
B \pm .010		.015		.015		.015		.015		.015	
L LENGTH	DASH NUMBER										
	PLAIN	PHOS.	PLAIN	PHOS.	PLAIN	PHOS.	PLAIN	PHOS.	PLAIN	PHOS.	
.188	1	11	21	41							
.250	2	12	22	42							
.312	3	13	23	43	63	83					
.375	4	14	24	44	64	84					
.438	5	15	25	45	65	85	105	125			
.500	6	16	26	46	66	86	106	126			
.562	7	17	27	47	67	87	107	127	147	167	
.625	8	18	28	48	68	88	108	128	148	168	
.688			29	49	69	89	109	129	149	169	
.750			30	50	70	90	110	130	150	170	
.812			31	51	71	91	111	131	151	171	
.875			32	52	72	92	112	132	152	172	
.938					73	93	113	133	153	173	
1.000					74	94	114	134	154	174	
1.125					75	95	115	135	155	175	
1.250							116	136	156	176	
1.375							117	137	157	177	
1.500									158	178	
1.625									159	179	
1.750									160	180	

For additional sizes and notes, see sheet 2.

P.A. WC Other Cust	TITLE PIN, STRAIGHT, STEEL-DRILL ROD	MILITARY STANDARD MS51838 (WC)
PROCUREMENT SPECIFICATION None	SUPERSEDES: BFDX1, BFDX2, BFDX3, BFDX3.1, BFDX4, BFDX4.1, BFDX5, BFDX5.1	SHEET 1 OF 2

DD FORM 672-1 (Limited circulation)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

This military standard is approved by the Weapons Command, Department of the Army and is mandatory for use by that activity. All other military activities are required to employ this standard where suitable.

APPROVED 10 SEP 1967 REVISED

This standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document.

REVIEWER: AV, EA, IS, NI
USER: AT, MC, ME, MU, PA, SH, WT

TABLE 1 - INTERCHANGEABILITY

FED. SPEC. CLASS
535494

PART NUMBER		PART NUMBER		PART NUMBER		PART NUMBER	
CANCELED	SUPSD BY	CANCELED	SUPSD BY	CANCELED	SUPSD BY	CANCELED	SUPSD BY
MS35494	MS35494	MS35494	MS35494	MS35494	MS35494	MS35494	MS35494
501	1	605	105	765	265	16-15	111
502	2	606	106	766	266	16-22	134
503	3	607	107	767	267	16-25	135
504	4	608	108	768	268	16-25	136
505	5	609	109	769	269	16-25	137
506	6	610	110	770	270	16-25	138
507	7	611	111	771	271	16-25	139
508	8	612	112	772	272	16-25	140
509	9	613	113	773	273	16-25	141
510	10	614	114	774	274	16-25	142
511	11	615	115	775	275	16-25	143
512	12	616	116	776	276	16-25	144
513	13	617	117	777	277	16-25	145
514	14	618	118	778	278	16-25	146
515	15	619	119	779	279	16-25	147
516	16	620	120	780	280	16-25	148
517	17	621	121	781	281	16-25	149
518	18	622	122	782	282	16-25	150
519	19	623	123	783	283	16-25	151
520	20	624	124	784	284	16-25	152
521	21	625	125	785	285	16-25	153
522	22	626	126	786	286	16-25	154
523	23	627	127	787	287	16-25	155
524	24	628	128	788	288	16-25	156
525	25	629	129	789	289	16-25	157
526	26	630	130	790	290	16-25	158
527	27	631	131	791	291	16-25	159
528	28	632	132	792	292	16-25	160
529	29	633	133	793	293	16-25	161
530	30	634	134	794	294	16-25	162
531	31	635	135	795	295	16-25	163
532	32	636	136	796	296	16-25	164
533	33	637	137	797	297	16-25	165
534	34	638	138	798	298	16-25	166
535	35	639	139	799	299	16-25	167
536	36	640	140	800	300	16-25	168
537	37	641	141	801	301	16-25	169
538	38	642	142	802	302	16-25	170
539	39	643	143	803	303	16-25	171
540	40	644	144	804	304	16-25	172
541	41	645	145	805	305	16-25	173
542	42	646	146	806	306	16-25	174
543	43	647	147	807	307	16-25	175
544	44	648	148	808	308	16-25	176
545	45	649	149	809	309	16-25	177
546	46	650	150	810	310	16-25	178
547	47	651	151	811	311	16-25	179
548	48	652	152	812	312	16-25	180
549	49	653	153	813	313	16-25	181
550	50	654	154	814	314	16-25	182
551	51	655	155	815	315	16-25	183
552	52	656	156	816	316	16-25	184
553	53	657	157	817	317	16-25	185
554	54	658	158	818	318	16-25	186
555	55	659	159	819	319	16-25	187
556	56	660	160	820	320	16-25	188
557	57	661	161	821	321	16-25	189
558	58	662	162	822	322	16-25	190
559	59	663	163	823	323	16-25	191
560	60	664	164	824	324	16-25	192
561	61	665	165	825	325	16-25	193
562	62	666	166	826	326	16-25	194
563	63	667	167	827	327	16-25	195
564	64	668	168	828	328	16-25	196
565	65	669	169	829	329	16-25	197
566	66	670	170	830	330	16-25	198
567	67	671	171	831	331	16-25	199
568	68	672	172	832	332	16-25	200
569	69	673	173	833	333	16-25	201
570	70	674	174	834	334	16-25	202
571	71	675	175	835	335	16-25	203
572	72	676	176	836	336	16-25	204
573	73	677	177	837	337	16-25	205
574	74	678	178	838	338	16-25	206
575	75	679	179	839	339	16-25	207
576	76	680	180	840	340	16-25	208
577	77	681	181	841	341	16-25	209
578	78	682	182	842	342	16-25	210
579	79	683	183	843	343	16-25	211
580	80	684	184	844	344	16-25	212
581	81	685	185	845	345	16-25	213
582	82	686	186	846	346	16-25	214
583	83	687	187	847	347	16-25	215
584	84	688	188	848	348	16-25	216
585	85	689	189	849	349	16-25	217
586	86	690	190	850	350	16-25	218
587	87	691	191	851	351	16-25	219
588	88	692	192	852	352	16-25	220
589	89	693	193	853	353	16-25	221
590	90	694	194	854	354	16-25	222
591	91	695	195	855	355	16-25	223
592	92	696	196	856	356	16-25	224
593	93	697	197	857	357	16-25	225
594	94	698	198	858	358	16-25	226
595	95	699	199	859	359	16-25	227
596	96	700	200	860	360	16-25	228
597	97	701	201	861	361	16-25	229
598	98	702	202	862	362	16-25	230
599	99	703	203	863	363	16-25	231
600	100	704	204	864	364	16-25	232
601	101	705	205	865	365	16-25	233
602	102	706	206	866	366	16-25	234
603	103	707	207	867	367	16-25	235
604	104	708	208	868	368	16-25	236
605	105	709	209	869	369	16-25	237
606	106	710	210	870	370	16-25	238
607	107	711	211	871	371	16-25	239
608	108	712	212	872	372	16-25	240
609	109	713	213	873	373	16-25	241
610	110	714	214	874	374	16-25	242
611	111	715	215	875	375	16-25	243
612	112	716	216	876	376	16-25	244
613	113	717	217	877	377	16-25	245
614	114	718	218	878	378	16-25	246
615	115	719	219	879	379	16-25	247
616	116	720	220	880	380	16-25	248
617	117	721	221	881	381	16-25	249
618	118	722	222	882	382	16-25	250
619	119	723	223	883	383	16-25	251
620	120	724	224	884	384	16-25	252
621	121	725	225	885	385	16-25	253
622	122	726	226	886	386	16-25	254
623	123	727	227	887	387	16-25	255
624	124	728	228	888	388	16-25	256
625	125	729	229	889	389	16-25	257
626	126	730	230	890	390	16-25	258
627	127	731	231	891	391	16-25	259
628	128	732	232	892	392	16-25	260
629	129	733	233	893	393	16-25	261
630	130	734	234	894	394	16-25	262
631	131	735	235	895	395	16-25	263
632	132	736	236	896	396	16-25	264
633	133	737	237	897	397	16-25	265
634	134	738	238	898	398	16-25	266
635	135	739	239	899	399	16-25	267
636	136	740	240	900	400	16-25	268
637	137	741	241	901	401	16-25	269
638	138	742	242	902	402	16-25	270
639	139	743	243	903	403	16-25	271
640	140	744	244	904	404	16-25	272
641	141	745	245	905	405	16-25	273
642	142	746	246	906	406	16-25	274
643	143	747	247	907	407	16-25	275
644	144	748	248	908	408	16-25	276
645	145	749	249	909	409	16-25	277
646	146	750	250	910	410	16-25	278
647	147	751	251	911	411	16-25	279
648	148	752	252	912	412	16-25	280
649	149	753	253	913	413	16-25	281
650	150	754	254	914	414	16-25	282
651	151	755	255	915	415	16-25	283
652	152	756	256	916	416	16-25	284
653	153	757	257	917	417	16-25	285
654	154	758	258	918	418	16-25	286
655	155	759	259	919	419	16-25	287
656	156	760	260	920	420	16-25	288
657	157	761	261	921	421	16-25	289
658	158	762	262	922	422	16-25	290
659	159	763	263	923	423	16-25	291
660	160	764	264	924	424	16-25	292
661	161	765	265	925	425	16-25	293
662	162	766	266	926	426	16-25	294
663	163	767	267	927	427	16-25	295
664	164	768	268	928	428	16-25	296
665	165	769	269	929	429	16-25	297
666	166	770	270	930	430	16-25	298
667	167						

TABLE II													FED. SUP. CLASS 5305	
STEEL, CADMIUM OR ZINC PLATED														
NOMINAL SIZE		2	3	4	5	6	7	8	9	10	12	14	16	18
L LENGTH	TOL.	DASH NO.	DASH NO.*	DASH NO.	DASH NO.*	DASH NO.	DASH NO.*	DASH NO.	DASH NO.*	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
.25		1		8		31								
.38	+ .00	2	901	9	20	32	44	56						
.50	- .03	3	902	10	21	33	45	57						
.62		4	903	11	22									
.75		5	904	12	23	34	46	58	69	83	98			
.88	+ .00		905	13	24	35	47	59	70	84	99			
1.00	- .05			14	25	36	48	60	71	85	100	113		
1.25				15	26	37	49	61	72	86	101	114	129	
1.50				16		38	50	62	73	87	102	115	130	142
1.75						39		63	74	88	103	116	131	
2.00	+ .00					40		64	75	89	104	117	132	144
2.25	- .06					41		65		90	105	118		
2.50						42		66	77	91	106	119	134	146
2.75								67		92	107	120	135	
3.00								68		93	108	121	136	148
3.50	+ .00									94	109	122	137	149
4.00	- .09										110	123	138	150
4.50												124	139	
5.00												125	140	

TABLE III														
BRASS, PLAIN, UNCOATED														
NOMINAL SIZE		2	3	4	5	6	7	8	9	10	12	14	16	
L LENGTH	TOL.	DASH NO.	DASH NO.*	DASH NO.	DASH NO.*	DASH NO.	DASH NO.*	DASH NO.	DASH NO.*	DASH NO.	DASH NO.	DASH NO.	DASH NO.	
.25		201		208		210								
.38	+ .00	202	910	209	220	211	242	253						
.50	- .03	203	911	210	221	212	243	254	265	275				
.62		204	912	211	222	213								
.75		205	913	212	223	214	244	255	266	276	289			
.88	+ .00			213	224	215	245	256	267	277	290			
1.00	- .05			214	225	216	246	257	268	278	291	303		
1.25						217	247	258	269	279	292	306		
1.50						218	248	259	270	280	293	307		
1.75								260		281	294	308		
2.00	+ .00							261		282	295	309	318	
2.25	- .06									283	296			
2.50										284	297	311	320	
3.00											299	313	322	
3.50	- .09										300			

* NOTE: Crossed-out dash numbers (sizes 3, 5, 7 and 9) are INACTIVE FOR NEW DESIGN AFTER 15 August 1974.

(E)

INTERCHANGEABILITY

Steel, cadmium plated screws covered by dash numbers 501 thru 630 given in revision B of this standard are canceled after 1 June 1967. Brass, black oxide coated screws covered by dash numbers 701 thru 822 given in revision C of this standard and screws covered on AN350 in part are canceled after 20 May 1968. The canceled screws should be used for maintenance purposes until existing stocks are depleted. Use only the superseding screws for new design and engineering. Replacement shall be in accordance with Table IV (see sheet 3).

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document.

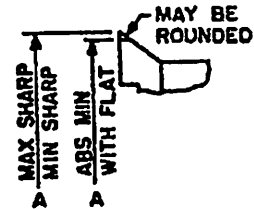
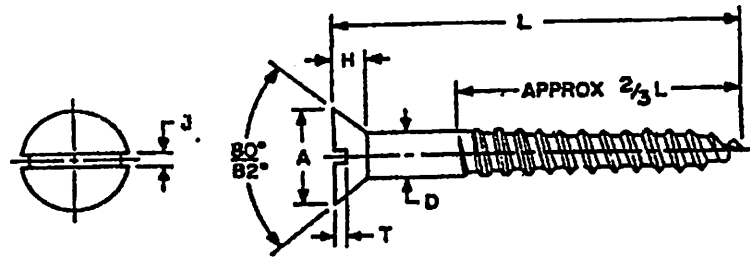
REVIEWER: AV, EA, IS, MT
 USER: AT, MC, ME, MU, PA, SH, VT

APPROVED 4 DEC 1956 REVISED (D) 20 MAY 1968 (E) FOR CHANGES SEE SHEETS 1 AND 2.

P.A. bC Other Cust YN 32	TITLE SCREW, WOOD, FLAT HEAD, SLOTTED, STEEL AND BRASS	MILITARY STANDARD MS 35494
PROCUREMENT SPECIFICATION FF-N-111	SUPERSEDES: AN350 in part, BQXX series and BQXX1	SHEET 2 OF 3

is. carry standard is approved for use by all Departments and Agencies
in. variant of Defunct. Selection for all new engineering and design
applications and for repetitive use shall be made from this document.

REVIEWER: AY, EA, IS, MI
USER: AT, NC, ME, NU, PA, SH, VT



FED SUP CLAI:
5305

TABLE I

NOMINAL SIZE		2	3*	4	5*	6	7*	8	9*	10	12	14	16	18
D SCREW DIA	BASIC MAX MIN	.086 .090 .079	.099 .103 .092	.112 .116 .105	.125 .129 .118	.138 .142 .131	.151 .155 .144	.164 .168 .157	.177 .181 .170	.190 .194 .183	.216 .220 .209	.242 .246 .235	.268 .272 .261	.294 .298 .287
A HEAD DIA	MAX SHARP MIN SHARP ABS MIN	.172 .156 .147	.199 .181 .171	.225 .207 .195	.252 .232 .220	.279 .257 .244	.305 .283 .268	.332 .308 .292	.358 .334 .316	.385 .359 .340	.438 .410 .389	.491 .461 .437	.544 .512 .485	.597 .563 .534
H HEAD HEIGHT	REF	.051	.059	.067	.075	.083	.091	.100	.108	.116	.132	.148	.164	.180
J SLOT WIDTH	MAX MIN	.031 .023	.033 .027	.039 .031	.043 .035	.048 .039	.048 .039	.054 .045	.054 .045	.060 .050	.067 .056	.075 .064	.075 .064	.084 .072
T SLOT DEPTH	MAX MIN	.023 .015	.027 .017	.030 .020	.034 .022	.038 .024	.041 .027	.045 .029	.049 .032	.053 .034	.060 .039	.068 .044	.075 .049	.083 .054
THREADS PER INCH		26	24	22	20	18	16	15	14	13	11	10	9	8

NOTES:

- (E) * Inactive, see sheet 2.
- MATERIAL:** Carbon steel, 1010 thru 1022 or 1108 thru 1118 in accordance with QQ-S-631, QQ-S-634, QQ-S-637 or QQ-W-405.
(E) Brass, alloy no. 260 or 268, quarter-hard in accordance with QQ-B-613 or QQ-B-626; or alloy no. 260 or 270, quarter-hard in accordance with QQ-W-321.
 - PROTECTIVE COATING:** Steel - Cadmium plated in accordance with QQ-P-416, Type II, Class 3 or MIL-C-81562, Type II, Class 3; or zinc coated in accordance with QQ-Z-325, Type II, Class 3 or MIL-C-81562, Type II, Class 3.
(E) Brass - Plain, uncoated.
 - THREADS:** Maximum permissible variation in number of threads per inch shall be plus or minus 10 percent.
 - DIMENSIONS:** All dimensions are in inches.
 - PART NUMBER:** The MS part number consists of the MS number, plus the dash number.
Example: MS35494-1.
 - Referenced documents shall be of the issue in effect on date of invitations for bid.
 - For design feature purposes, this standard takes precedence over procurement documents referenced herein.

(E) FOR CHANGES SEE SHEETS 1 AND 2.

P.A. MC
Other Cust YD
82

TITLE

SCREW, WOOD, FLAT HEAD, SLOTTED,
STEEL AND BRASS

MILITARY STANDARD

MS 35494

SHEET 1 OF 3

APPROVED 4 DEC 1956 REVISED (A) 12 NOV 1961 (B) 18 OCT 1966 (C) 1 JUN 1967 (D) 20 MAY 1969 (E) 15 AUG 1974

NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS DOCUMENT AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS DOCUMENT SHALL TAKE PRECEDENCE.
3. UNLESS OTHERWISE SPECIFIED, ISSUE OF REFERENCED DOCUMENTS ARE THOSE IN EFFECT AT THE TIME OF SOLICITATION.

CADMIUM OR ZINC COATED STEEL WASHERS ONLY, PREVIOUSLY SPECIFIED ON MS15795 WERE CANCELLED AND SUPERSEDED BY CADMIUM PLATED STEEL WASHERS SPECIFIED HEREIN.

UNCOATED STEEL WASHERS AND PHOSPHATE COATED STEEL WASHERS, COVERED BY DASH NUMBERS GIVEN ON MS15795, ARE CANCELLED/INACTIVATED AFTER THE INDICATED APPROVAL DATE FOR REVISION A OF SUPERSEDING STANDARD MS27183. USE THE DASH NUMBERS GIVEN IN THE PRECEDING SHEET OF THIS STANDARD. THE CANCELLED WASHERS CAN NOT ALWAYS REPLACE THE NEW WASHERS AND SHOULD BE USED UNTIL EXISTING STOCK IS DEPLETED. THEN USE ONLY THE NEW WASHERS FOR DESIGN AND REPLACEMENT. REPLACEMENT SHALL BE IN ACCORDANCE WITH THIS TABLE.

TABLE II. INTERCHANGEABILITY.

PART NUMBERS				PART NUMBERS			
CANCELLED			NEW	CANCELLED			NEW
UNCOATED	PHOSPHATE	CAD or ZN	CADMIUM	UNCOATED	PHOSPHATE	CAD or ZN	CADMIUM
MS15795-1	MS15795-101	MS15795-201	MS27183-1	MS15795-21	MS15795-121	MS15795-221	MS27183-22
-2	-102	-202	-2	-22	-122	-222	-23
-3	-103	-203	-3	-23	-123	-223	-24
-4	-104	-204	-4	-24	-124	-224	-25
-5	-105	-205	-5	-25	-125	-225	-26
-6	-106	-206	-6	-26	-126	-226	-27
-7	-107	-207	-7	-27	-127	-227	-28
-8	-108	-208	-8	-28	-128	-228	-29
-9	-109	-209	-9	-29	-129	-229	-30
-10	-110	-210	-10	-30	-130	-230	-31
-11	-111	-211	-11	-31	-131	-231	-32
-12	-112	-212	-12	-32	-132	-232	-33
-13	-113	-213	-13	-33	-133	-233	-34
-14	-114	-214	-14	-34	-134	-234	-35
-15	-115	-215	-15	-35	-135	-235	-36
-16	-116	-216	-16	-36	-136	-236	-37
-17	-117	-217	-17	-37	-137	-237	-38
-18	-118	-218	-18	-38	-138	-238	-39
-19	-119	-219	-19	-39	-139	-239	-40
-20	-120	-220	-21	-40	-140		-20

MILITARY INTERESTS

CUSTODIANS

ARMY - AR

NAVY - OS

AIR FORCE - 82

REVIEWER:

ARMY - AV, ER, MI

NAVY - AS, SH, MC

NATIONAL SECURITY AGENCY - NS

PREPARING ACTIVITY

DLA-IS

(PROJECT: 5310-2210)

TABLE I. DASH NUMBERS AND DIMENSIONS. (continued)

DASH NUMBER	#A	TOLERANCE		#B	TOLERANCE		C THICKNESS (BASIC)	TOLERANCE		D
		(+)	(-)		(+)	(-)		MAX	MIN	
-51	.250	.015	.015	1.000	.015	.005	.065	.080	.051	.005
-52	.281	.015	.005	.734	.015	.007	.065	.080	.051	.005
-11	.312	.015	.005	.734	.015	.007	.065	.080	.051	.005
-12	.344	.015	.005	.688	.015	.007	.085	.080	.051	.005
-13	.375	.015	.005	.875	.030	.007	.083	.104	.064	.005
-53	.312	.015	.005	.875	.015	.015	.065	.075	.051	.005
-54	.312	.015	.005	.500	.015	.005	.035	.048	.027	.005
-55	.375	.015	.005	.734	.015	.005	.083	.094	.064	.005
-56	.375	.015	.005	.625	.030	.010	.035	.048	.027	.005
-57	.406	.015	.005	.875	.015	.007	.083	.070	.051	.005
-58	.412	.010	.005	.625	.005	.005	.032	.040	.025	.005
-14	.406	.015	.005	.812	.015	.007	.085	.080	.051	.005
-15	.438	.015	.005	1.000	.030	.007	.083	.104	.064	.005
-59	.438	.015	.005	1.365	.015	.007	.083	.104	.064	.005
-60	.438	.015	.005	.875	.015	.007	.065	.080	.051	.005
-61	.438	.015	.005	1.625	.015	.007	.065	.104	.051	.005
-62	.469	.005	.020	.734	.030	.007	.065	.080	.051	.005
-16	.469	.015	.005	.922	.015	.007	.065	.080	.051	.005
-17	.500	.015	.005	1.250	.030	.007	.083	.104	.064	.005
-18	.531	.015	.005	1.082	.030	.007	.095	.121	.074	.005
-19	.562	.015	.005	1.375	.030	.007	.109	.132	.088	.005
-20	.594	.015	.005	1.156	.030	.007	.095	.121	.074	.005
-63	.656	.015	.010	2.125	.030	.007	.095	.115	.080	.005
-21	.656	.030	.007	1.312	.030	.007	.095	.121	.074	.005
-22	.688	.030	.007	1.750	.030	.007	.134	.160	.108	.005
-23	.812	.030	.007	1.469	.030	.007	.134	.160	.108	.005
-24	.812	.030	.007	2.000	.030	.007	.148	.177	.122	.005
-25	.938	.030	.007	1.750	.030	.007	.134	.160	.108	.010
-26	.938	.030	.007	2.250	.030	.007	.165	.192	.136	.010
-27	1.062	.030	.007	2.000	.030	.007	.134	.160	.108	.010
-28	1.062	.030	.007	2.500	.030	.007	.165	.192	.136	.010
-29	1.250	.030	.007	2.750	.030	.007	.165	.192	.136	.010
-30	1.375	.030	.007	3.000	.030	.007	.165	.192	.136	.010
-31	1.500	.045	.010	3.250	.045	.010	.180	.213	.153	.010
-32	1.625	.045	.010	3.500	.045	.010	.180	.213	.153	.010
-33	1.750	.045	.010	3.750	.045	.010	.180	.213	.153	.010
-34	1.875	.045	.010	4.000	.045	.010	.180	.213	.153	.010
-35	2.000	.045	.010	4.250	.045	.010	.180	.213	.153	.010
-36	2.125	.045	.010	4.500	.045	.010	.180	.213	.153	.010
-37	2.375	.045	.010	4.750	.045	.010	.220	.248	.193	.010
-38	2.625	.045	.010	5.000	.045	.010	.238	.280	.210	.010
-39	2.875	.065	.010	5.250	.065	.010	.259	.310	.228	.010
-40	3.125	.065	.010	5.500	.065	.010	.284	.327	.249	.010

REQUIREMENTS:

1. MATERIAL. STEEL, CARBON GRADES 1005 THRU 1020 (UNS G10050 THRU UNS G10200), IN ACCORDANCE WITH ASTM A108, ASTM A109 OR ASTM A569, ANY TEMPER.
2. PROTECTIVE COATING AND SURFACE TREATMENT. CADMIUM PLATE IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 3.
3. SURFACE TEXTURE. BEARING SURFACE ROUGHNESS SHALL NOT EXCEED 125 MICROINCHES (R_a) IN ACCORDANCE WITH ANSI/ASME B46.1.
4. PART NUMBER. THE PART NUMBER SHALL CONSIST OF THE BASIC MS NUMBER FOLLOWED BY A DASH NUMBER FROM TABLE I.

EXAMPLE: MS27183-1



MS27183-1 INDICATES - WASHER, FLAT (ROUND, STEEL, CADMIUM PLATED); INSIDE DIAMETER .078; OUTSIDE DIAMETER .188; THICKNESS .020

INCH-POUND

MS27183J
11 MARCH 1996
SUPERSEDING
MS27183H
19 JUNE 1995

MILITARY SPECIFICATION SHEET
WASHER, FLAT (ROUND, STEEL,
CADMIUM PLATED) GENERAL PURPOSE

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS
AND AGENCIES OF THE DEPARTMENT OF DEFENSE.

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST
OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING DOCUMENT
LISTED IN THAT ISSUE OF THE DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS
AND STANDARDS (DODISS) SPECIFIED IN THE SOLICITATION: FF-W-92

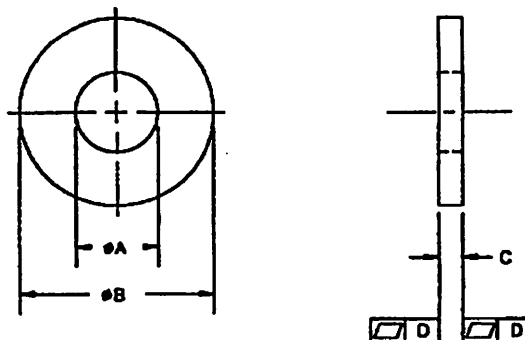


TABLE I. DASH NUMBERS AND DIMENSIONS.

DASH NUMBER	A	TOLERANCE		B	TOLERANCE		C THICKNESS (BASIC)	TOLERANCE		D
		(+)	(-)		(+)	(-)		MAX	MIN	
-1	.078	.000	.005	.188	.000	.005	.020	.025	.016	.005
-2	.094	.000	.005	.250	.000	.005	.020	.025	.016	.005
-3	.125	.000	.005	.250	.000	.005	.022	.028	.017	.005
-4	.125	.008	.005	.312	.008	.005	.032	.040	.025	.005
-5	.156	.008	.005	.312	.008	.005	.035	.048	.027	.005
-43	.156	.008	.005	.250	.000	.015	.016	.020	.013	.005
-6	.156	.008	.005	.375	.015	.005	.049	.065	.036	.005
-7	.188	.008	.005	.375	.015	.005	.049	.065	.036	.005
-41	.188	.008	.005	.438	.015	.005	.049	.065	.036	.005
-8	.219	.008	.005	.438	.015	.005	.049	.065	.036	.005
-42	.219	.008	.005	.500	.015	.005	.049	.065	.036	.005
-44	.125	.008	.005	.375	.015	.005	.032	.040	.025	.005
-45	.141	.008	.005	.281	.005	.005	.032	.040	.025	.005
-46	.188	.008	.005	.500	.015	.005	.065	.080	.051	.005
-47	.219	.008	.005	.365	.005	.015	.032	.040	.025	.005
-48	.250	.005	.020	.938	.005	.015	.065	.080	.051	.005
-49	.250	.015	.005	.562	.015	.005	.032	.040	.025	.005
-50	.250	.015	.005	.625	.015	.005	.032	.040	.025	.005
-9	.250	.015	.005	.562	.015	.005	.065	.080	.051	.005
-10	.281	.015	.005	.625	.015	.005	.065	.080	.051	.005

J

ENTIRE DOCUMENT REVISED

ASMC N/A

1 OF 3

FSC 5310

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 & Agencies of the Department of Defense. Selection for all new
 engineering and design applications and for repetitive use shall
 be made from this document, when applicable.

TABLE II. (Continued)				
L LENGTH	TOL	CARBON STEEL		CORROSION RESISTANT STEEL
		CADMIUM PLATED	PHOSPHATE COATED	
		DASH NO.	DASH NO.	
.438 NOMINAL SIZE				
1.250	±.020	84	178	273
1.500		85	179	273
1.750		86	180	274
2.000		87	181	275
2.500	±.025	88	182	276
3.000		89	183	277
.500 NOMINAL SIZE				
1.500	±.020	90	184	278
1.750		91	185	279
2.000		92	186	280
2.500	±.025	93	187	281
3.000		94	188	282

P.A. AR Other Cust OS 99	TITLE PIN, SPRING - TUBULAR, SLOTTED	MILITARY STANDARD MS16562
PROCUREMENT SPECIFICATION MIL-P-10971	SUPERSEDED:	PAGE 4 OF 4

FED. SUP CLASS
5315

APPROVED 24 JUL 1959 FOR CHANGES SEE PAGES 1, 2, 3 AND 4

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User activities
MC, SH

DD FORM 1672-1 (Coordinate)

REPLACES DD FORM 1672-1, 1 MAR 67, WHICH IS OBSOLETE.

PAGE 3 OF 4

PLATE NO. 2008

FED. SUP. CLASS
MS16

TABLE II

L. LENGTH	TOL.	CARBON STEEL		CORROSION- RESISTANT STEEL
		CADMIUM PLATED	PHOSPHATE COATED	
DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
.062 NOMINAL SIZE				
.186	1	95	186	186
.260	2	96	190	190
.312	3	97	191	191
.376	4	98	192	192
.438	5	99	193	193
.500	6	100	194	194
.562	7	101	195	195
.625	8	102	196	196
.688	9	103	197	197
.750	10	104	198	198
.076 NOMINAL SIZE				
.250	11	105	199	199
.312	12	106	200	200
.376	13	107	201	201
.438	14	108	202	202
.500	15	109	203	203
.562	16	110	204	204
.625	17	111	205	205
.688	18	112	206	206
.750	19	113	207	207
1.000	20	114	208	208
.094 NOMINAL SIZE				
.250	21	115	209	209
.312	22	116	210	210
.376	23	117	211	211
.438	24	118	212	212
.500	25	119	213	213
.562	26	120	214	214
.625	27	121	215	215
.688	28	122	216	216
.750	29	123	217	217
1.000	30	124	218	218
.126 NOMINAL SIZE				
.375	31	125	219	219
.438	32	126	220	220
.500	33	127	221	221
.562	34	128	222	222
.625	35	129	223	223
.750	36	130	224	224
.875	37	131	225	225
1.000	38	132	226	226
1.250	39	133	227	227
.156 NOMINAL SIZE				
.500	40	134	228	228
.562	41	135	229	229
.625	42	136	230	230
.688	43	137	231	231
.750	44	138	232	232
1.000	45	139	233	233
1.250			234	234
.198 NOMINAL SIZE				
.500	46	140	234	234
.562	47	141	235	235
.625	48	142	236	236
.688	49	143	237	237
.750	50	144	238	238
1.000	51	145	239	239
1.250	52	146	240	240
	53	147	241	241
.250 NOMINAL SIZE				
.750	54	148	242	242
.875	55	149	243	243
1.000	56	150	244	244
1.250	57	151	245	245
.500	58	152	246	246
.562	59	153	247	247
.625	60	154	248	248
.688	61	155	249	249
.312 NOMINAL SIZE				
.750	62	156	250	250
.875	63	157	251	251
1.000	64	158	252	252
1.250	65	159	253	253
.500	66	160	254	254
.562	67	161	255	255
.625	68	162	256	256
.688	69	163	257	257
.376 NOMINAL SIZE				
1.000	70	164	258	258
1.250	71	165	259	259
1.500	72	166	260	260
1.750	73	167	261	261
2.000	74	168	262	262
2.500	75	169	263	263
3.000	76	170	264	264
.438 NOMINAL SIZE				
1.000	77	171	265	265
1.250	78	172	266	266
1.500	79	173	267	267
1.750	80	174	268	268
2.000	81	175	269	269
2.500	82	176	270	270
3.000	83	177	271	271

APPROVED 24 JUL 1959

FOR CHANGES SEE PAGES 1, 2, 3 AND 4

MILITARY STANDARD
MS16562

FIN, SPRUNG - TUBULAR, SLOTTED

P.A. 08-
Other Case 99

PROPOSED SPECIFICATION
MIL-STD-10071

SUPERSEDES

Review activities:
ARMY - AV, ME, MI
DLA - IS
NSA - NS

User activities:
NC, SH

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NOTES:-

1. ALL DIMENSIONS ARE IN INCHES.
2. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS STANDARD AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS STANDARD SHALL TAKE PRECEDENCE.
3. REFERENCED GOVERNMENT (OR NONGOVERNMENT) DOCUMENTS OF THE ISSUE LISTED IN THAT ISSUE OF THE DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS AND STANDARDS (DoD ISS) SPECIFIED IN THE SOLICITATION FORM A PART OF THIS STANDARD TO THE EXTENT SPECIFIED HEREIN.

FED. SUP CLASS
5315

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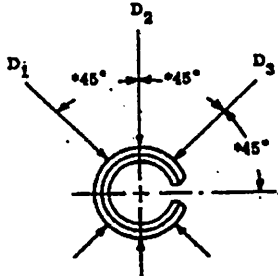
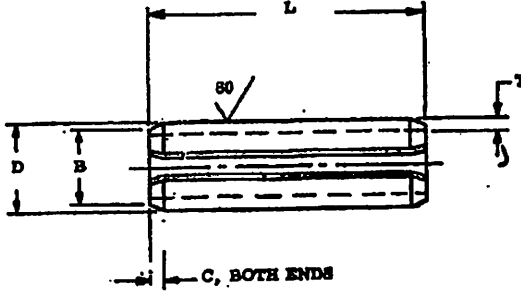

P.A. AR Other Cost OS 99	TITLE PIN, SPRING-TUBULAR, SLOTTED	MILITARY STANDARD MS16562
PROCUREMENT SPECIFICATION	SUPERSEDES:	PAGE 2 OF 4

User activities:
Army - AV, ME, MI
Navy - MC, SH

Review activities:
ARMY - AV, ME, MI
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5315

*APPROXIMATE
MIN AVERAGE DIA.
 $\frac{D_1 + D_2 + D_3}{3}$

C, BOTH ENDS

ALTERNATE
END DESIGN

TABLE I

NOM SIZE	D DIA		C CHAMFER		B CHAMFER DIA	T WALL THICKNESS NOM	DOUBLE SHEAR STRENGTH LBS-MIN	RECOMMENDED HOLE SIZE	
	MAX	MIN AVG	MAX	MIN	MAX			MAX	MIN
.062	.069	.066	.028	.007	.059	.012	425	.065	.062
.078	.086	.083	.028	.008	.075	.018	650	.081	.078
.094	.103	.099	.038	.008	.091	.022	1,000	.097	.094
.125	.135	.131	.044	.008	.122	.028	2,100	.129	.125
.156	.167	.162	.048	.010	.151	.032	3,000	.160	.156
.188	.199	.194	.055	.011	.183	.040	4,400	.192	.187
.219	.232	.226	.065	.011	.214	.048	5,700	.224	.219
.250	.264	.258	.065	.012	.245	.045	7,700	.256	.250
.312	.328	.321	.080	.014	.305	.062	11,500	.318	.312
.375	.392	.386	.095	.016	.368	.077	17,600	.382	.375
.438	.455	.448	.095	.017	.430	.077	20,000	.445	.437
.500	.521	.513	.110	.025	.485	.094	25,800	.510	.500

REQUIREMENTS:

- MATERIAL:** STEEL, CARBON, GRADES 1070 THRU 1095 (UNS G10700 THRU G10950) IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.
STEEL, CORROSION-RESISTANT, TYPES 410 (UNS S41000) AND 420 (UNS S42000) IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.
- SURFACE ROUGHNESS:** SURFACE ROUGHNESS SHALL BE IN ACCORDANCE WITH ANSI B46.1 BEFORE MEETING PROTECTIVE COATING AND SURFACE TREATMENT REQUIREMENT.
- PROTECTIVE COATING AND SURFACE TREATMENT:**
CARBON STEEL-CADMIUM PLATED IN ACCORDANCE WITH QQ-P-416, TYPE 11, CLASS 2.
PHOSPHATE COATED IN ACCORDANCE WITH DOD-P-16232, TYPE 2, CLASS 2.
CORROSION-RESISTANT STEEL-CLEANED, DESCALED AND PASSIVATED IN ACCORDANCE WITH ASTM A380.
- HARDNESS:** CARBON STEEL-46 TO 53 HRC.
CORROSION-RESISTANT STEEL-43 TO 52 HRC.
- PART NUMBER:** THE PART NUMBER SHALL CONSIST OF THE BASIC MS NUMBER FOLLOWED BY A DASH NUMBER FROM TABLE II.
EXAMPLE: MS16562-1

DASH NUMBER
 BASIC MS NUMBER

MS16562-1 = PIN, SPRING-TUBULAR, SLOTTED, .062 NOMINAL SIZE, .188 LENGTH, CARBON STEEL, CADMIUM PLATED.

© ENTIRE STANDARD REVISED

P.A. AR Order Cust OS 99	TITLE PIN, SPRING - TUBULAR, SLOTTED	MILITARY STANDARD MS16562
PROCUREMENT SPECIFICATION MIL-P-10971	SUPERSEDES:	PAGE 1 OF 4

Figure 3
Catch-Cord Diagram

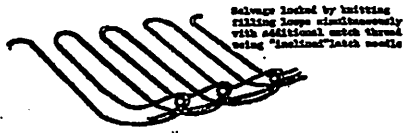


Figure 4
Catch-Cord Diagram

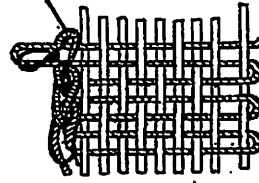


Figure 4
Flycatcher Capture Mechanism

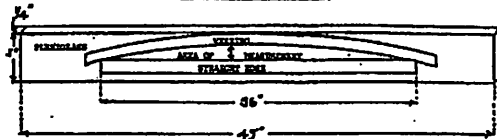
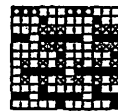


Figure 5



EDGE

EDGE

EDGE

- 1. FLYCATCHER - MAIN 1 (SEE AS 1)
- 2. FLYCATCHER - MAIN 2 (SEE AS 1)
- 3. FLYCATCHER - MAIN 3 (SEE AS 1)

EDGE

EDGE

0899E4-A-TDI

[illegible][illegible]

REF ID: A53686

4.3 First article inspection. When a first article is required (see 4.2), it shall be examined for the defects specified in table XII, 4.4.3.3, 4.4.3.4, and tested for the characteristics specified in table IV. The presence of any defect or failure to pass any test shall be cause for rejection of the first article.

4.4 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with MIL-STD-105.

4.4.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected in accordance with all the requirements of referenced documents unless otherwise excluded, amended, notified or qualified in this document or applicable purchase documents.

4.4.2 End item examination.

4.4.2.1 Yard-by-yard examination. The webbing shall be examined on both sides for the defects listed in table XII. All defects found shall be counted regardless of their proximity to each other except where two or more defects represent a single local condition, in which case only the more serious defect shall be counted. A continuous defect shall be counted as one defect for each yardage yard or fraction thereof in which it occurs. The lot size shall be expressed in yards. The sample unit shall be 1 linear yard. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 0.05 for major defects and 2.5 for total (major and minor combined) defects. The number of rolls from which the sample yardage is to be selected shall be in accordance with table II. The sample yardage shall be apportioned equally among the selected rolls.

TABLE II. Sample size

Lot size in yards	Sample size in rolls	Acceptance number
1200 or less 1/	3	0
1201 up to and including 1200	5	0
1201 up to and including 10,000	8	0
10,001 up to and including 15,000	13	0
15,001 up to and including 150,000	20	1
150,001 and over	32	2

1/ If lot contains fewer than three rolls, each roll in lot shall be examined.

TABLE XII. Webbing visual defects

Examine	Defect	Classification	
		Major	Minor
Abrasion marks	Resulting in rupture of yarns, or in nap sufficient to obscure the identity of any yarn exceeding 10 percent of width or 1 inch in length		X
Broken or missing warp and	Two or more regardless of length or a single exceeding 6 inches in length	X	
	Single under 6 inches but exceeding 1/4 inch		X
Broken or missing pick	Two or more regardless of extent	X	
Cut, hole or tear	Any cut, hole or tear	X	
Catchboard missing	Any (substantial construction)	X	
Dropped knitted stitch on edge	Any (substantial construction)	X	
Fine or light filling bar	Resulting in visible difference in stiffness or thickness, extending more than 1/4 inch in length	X	
	Resulting in visible difference in stiffness or thickness extending for 1/4 inch or less in length		X
Films or skips	Three or more, 1/2 inch or more in combined warp and filling directions or a single film or skip over more than 1 inch	X	
	Three or more, less than 1/2 inch in combined warp and filling directions or a single film or skip over more than 1/2 inch but not exceeding 1 inch if in warp or more than 1/4 inch of width but not exceeding 1 inch in filling		X

TABLE XII. Webbing visual defects (cont'd)

Examine	Defect	Classification	
		Major	Minor
Knots	More than 1 knot in any 9 linear inches		X
Black or light end or ends	Two or more in same length, joined in between picks, or forming clearly visible loops on surface	X	
	Single joined in between picks or forming clearly visible loops on the surface		X
Smash	Any smash	X	
Spot, stain or streak	Any clearly visible 1/		X
Wrong draw	Extending more than 9 inches in length	X	
Edges	Cut, frayed or torn	X	
	Slack, poorly constructed	X	
Wavy or pushed	Will not lie flat upon application of manual pressure (due to twist, distortion or uneven tension) 2/		X
Width	Beyond tolerances		X

1/ Clearly visible at normal inspection distance (approximately 3 feet).

2/ A three yard length of webbing shall be laid on a flat, smooth surface without tension. If the webbing does not lie flat or if the webbing is wavy or pushed, it shall be scored as a defect.

4.4.2.2 Overall examination. The webbing shall be examined for the defects listed below. Each defect listed shall be counted not more than once in each roll examined. The sample size shall be the applicable number of rolls indicated in table II. Each roll in the sample examined over its entire length. The lot shall be rejected if the total number of defects in the sample exceeds the applicable acceptance number specified in table II.

Defects

Off shade, not within established tolerances.
Screen drying, shaded, spots, poor penetration.
Not labeled in accordance with Textile Fiber Products Identification Act.
Unwoven weaving throughout.

4.4.2.3 Length examination. During the overall examination, each roll in the sample shall be examined for the defects listed below. If the total number of defects in the sample rolls exceeds the applicable acceptance number specified in table II or if the total of the actual lengths of the rolls in the sample is less than the total of the lengths marked on the roll tickets, the lot shall be rejected.

Defects

Gross length less than specified minimum or more than specified maximum length.
Gross length more than 2 yards less than gross length marked on ticket.
Any piece less than 50 inches in length.
Any roll containing more than two pieces.

4.4.3 End item testing. The webbing shall be tested for the characteristics listed in table IV. The methods of testing specified in FED-STD-151 wherever applicable and as listed in table IV shall be followed. All test reports shall contain the individual values utilized in expressing the final results. The sample unit for testing shall be as follows:

For type I webbing 7 yards
For type II, III, IV and V webbing 12 yards

The sample size shall be in accordance with the following:

Lot size (yards)	Sample size (sample units)
500 or less	2
501 up to and including 22,000	3
22,001 up to and including 150,000	5

The lot shall be rejected if one or more sample units fail to meet any requirement specified.

MAIN FORM

KIL-W-43668C
21 November 1968
SUPERSEDED
KIL-W-43668B
7 August 1970

MILITARY SPECIFICATION

WEAVING, TEXTILE, TEXTURED OR MULTIFILAMENT NYLON

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 **Scope.** This document covers textured or multifilament nylon webbing used for individual equipment belts.

1.2 **Classification.** The webbing shall be of the following types as specified (see 4.2). All types may be supplied in an alternate construction of multifilament loose webbing. Type I alternate and Type III (see table 1) alternate are acceptable substitutes for Type I and III respectively.

Type I	- 2-1/8 inches
Type II	- 1-1/4 inches
Type III	- 1 inch
Type IV	- 3/4 inch
Type V	- 5/8 inch

Official comments (recommendations, additions, deletions) and any pertinent data which may be used in improving this document should be addressed to: U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01900-0014, by using the self-addressed Standardization Document Improvement Proposal (SD Form 1485) appearing at the end of this document or by letter.

AMSC N/A

FIG 8305

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

THIS DOCUMENT CONTAINS 24 PAGES.

KIL-W-43668C

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 **Specification, standards, and handbooks.** The following specifications, standards, and handbooks form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODDIS) and supplement thereto, cited in the solicitation.

SPECIFICATION

MILITARY

KIL-W-43334 - Packaging of Textile Webbing and Tape

STANDARDS

FEDERAL

FED-STD-191 - Textile Test Methods

MILITARY

KIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes

(Copies of specifications, standards, and handbooks required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

2.1.2 **Other Government documents, drawings, and publications.** The following other Government documents, drawings, and publications form a part of this specification to the extent specified herein. Unless otherwise specified, the issues shall be those in effect on the date of the solicitation.

FEDERAL TRADE COMMISSION

Rules and Regulations Under the Textile Fiber Products Identification Act

(Copies may be obtained from the Federal Trade Commission, Pennsylvania Avenue at Ninth Street, N.W., Washington, DC 20530.)

(Copies of drawings, publications, and other Government documents required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

2

KIL-W-43668C

2.2 **Other publications.** The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are not adopted shall be those listed in the issue of the DODDIS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODDIS shall be the issues of the non-government documents which are current on the date of the solicitation.

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

Chromatic Transference Scale

(Copies should be obtained from the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709-2215.)

(Other government standards and other publications are normally available from the organizations which prepare or which distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 **Order of precedence.** In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 **Standard sample.** The dyed webbing shall match the standard sample for shade and shall be equal to or better than the standard sample with respect to all characteristics for which the standard sample is referenced (see 4.3).

3.2 **First article.** When specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.3, 6.2, and 6.4).

3.3 **Material.** (See 6.4).

3.3.1 **Yarn.** The yarn for the warp and filling for types I, II, III, IV, V and the filling for type III alternate shall be heat and light resistant, continuous filament textured nylon. The yarn for warp and filling for type I alternate and the warp for type III alternate shall be heat and light resistant multifilament nylon. The textured and multifilament nylon yarns shall not be subjected to any type of bleaching process.

3.3.1.1 **Twist.** The face, back and binder warps of the type I alternate construction shall have a minimum of 2-1/2 turns per inch in the final twist. The number of single yarns shall be twisted together in one operation.

KIL-W-43668C

3.4 **Color.** The webbing shall be natural, dyed Olive Drab 7, Camouflage Green M3, Black J75, or another color, as specified (see 6.2).

3.4.1 **Dyeing.** The webbing shall be yarn or piece dyed, and the dye penetration shall be equal to or better than the standard sample.

3.4.2 **Matching.** The color of the dyed webbing shall match the standard sample when viewed under filtered tungsten lamps which approximate artificial daylight having a correlated color temperature of 7500 +/- 200 K, with illumination of 100 +/- 20 foot candles, and shall be a good match to the standard sample under incandescent lamp light at 2500 +/- 200 K.

3.4.3 **Colorfastness.** The dyed webbing shall show fastness to light and laundering equal to or better than the standard sample or equal to or better than a rating of "good". The dyed webbing shall show fastness to crocking equal to or better than the standard sample or shall have an AATCC Chromatic Transference Scale rating of not lower than 1.5. Testing shall be as specified in 4.4.3.

3.4.4 **Spectral reflectance for Camouflage Green M3.** Finished Camouflage Green M3 webbing greater than 1 1/4 inches in width shall meet the spectral reflectance factors (in percent) for the visible/near infrared wavelength range 400 to 840 nanometers (nm) as specified below when tested as specified in 4.4.3.

Spectral Reflectance Requirements for Camouflage Green M3

Wavelength (nm)	Reflectance (%)		Wavelength (nm)	Reflectance (%)	
	Min	Max		Min	Max
400	3	10	740	11	40
420	3	10	760	11	40
440	3	10	780	17	44
460	3	11	800	28	67
480	3	13	820	32	70
500	3	25	840	37	71
520	3	40	860	40	73

3.5 **Physical requirements.** The dyed webbing shall conform to the requirements specified in Table 1 when tested as specified in 4.4.3.

3

4

4.3 Cross reference data. Loops, slide conforming to this CID are interchangeable/substitutable with Loops, slide conforming to MS51940C dated 14 June 1971.

TABLE II. CROSS-REFERENCE TABLE.

Cancelled MS PIN	Replacement CID PIN
MS51940-3S	AA55620-3S
MS51940-4S	AA55620-4S
MS51940-5S	AA55620-5S
MS51940-7S	AA55620-7S

Military Interests:

Custodians:

Army - GL
Navy - YD1
Air Force -99

Preparing Activity:

DLA-IS

(Project 5340-2235)

Review Activity:

Air Force - 82

A-A-55620

TABLE I. DASH NUMBERS AND DIMENSIONS.

DASH NO.	STRAP WIDTH (REF)	A	C	E	F
-3S	1	1.062	1.312	.090	.135
-4S	1.25	1.312	1.625	.090	.166
-5S	1.50	1.625	1.875	.090	.188
-7S	2	2.125	2.375	.090	.188

2.2 Material. Loops shall be made of cold rolled carbon steel strips per ASTM A109, No. 3 quarter hard temper.

2.3 Finish. Steel loops shall be given a phosphate treated zinc plate, conforming to Type III, SC2 per ASTM B633, followed by baked enamel per TT-E-529, color black.

2.4 Tolerance. .xxx ±.005.

3. QUALITY CONFORMANCE PROVISIONS.

3.1 The suppliers shall be responsible for those in process controls and inspections necessary to supply a product consistently conforming to the requirements of this document.

3.2 Upon request, the supplier will certify with documented test/inspection evidence, that the part supplied meets the requirements of this document.

4. NOTES.

4.1 Unless otherwise specified, all dimensions are in inches.

4.2 The Part Identification Number (PIN) shall consist of the basic commercial item description number followed by a dash number from Table I.

Example: AA55620 - 3S

└─ Dash number
└─ Basic number

A-A-55620
17 November 1995
SUPERSEDING
MS51940C
14 June 1971

COMMERCIAL ITEM DESCRIPTION

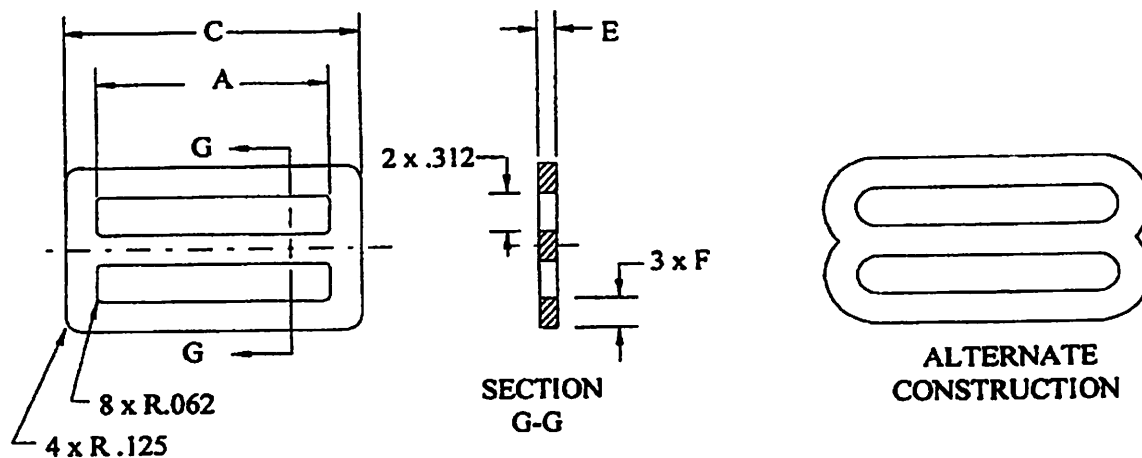
LOOPS, SLIDE (FOR EQUIPAGE)

This General Services Administration has authorized the use of this Commercial Item Description for all federal agencies..

1. **SCOPE:** This Commercial Item Description (CID) covers the following style of slide loops intended for equippage items.

2. **SALIENT CHARACTERISTICS:**

2.1 Loop slide configurations.



BENEFICIAL COMMENTS, RECOMMENDATIONS, ADDITIONS, DELETIONS, CLARIFICATIONS, ETC., AND DATA WHICH MAY IMPROVE THIS DOCUMENT SHOULD BE SENT TO: DEFENSE INDUSTRIAL SUPPLY CENTER, ATTN: DISC-EED, 700 ROBBINS AVENUE, PHILADELPHIA, PA 19111-5096.

ASMC N/A

1 OF 3

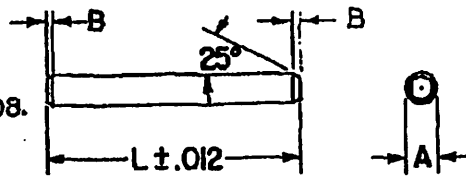
FSC 5340

DISTRIBUTION STATEMENT A. APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.

8244 9881

NOTES:

- 1-ANSI Y14.5-73 APPLIES.
- 2-STEEL, BAR CARBON, NON-RESULFERIZED PER ASTM A108. STRESS RELIEF REQUIRED IF COLD DRAWN.
- 3-QAP 8432695 APPLIES. WAS BFKXI



REVISIONS

MF	SYM	DESCRIPTION	DATE	APPROVAL
A		SEE ERR NQR-21198	14 Nov 72	MEH
B		(1-5) SEE NOR NO 76 B0041-0037	761004	CBC
C		REPLACES REV B WITH CHANGES NORW252018 82-09-20	821104	
D		NOR W2A2123, 82-08-31	821220	
E		ERR2921E90AU ECP6953118/891212	90-10-29	MEH

	SYM	1/16	3/32	7/64	1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2
1 Ø	MAX.	.0600	.0912	.1068	.1221	.1535	.1847	.2159	.2470	.3084	.3717	.4341	.4964
2 CHAMFER	MIN.	.0605	.0907	.1063	.1218	.1530	.1842	.2154	.2465	.3069	.3712	.4336	.4969
		.010	.010	.010	.010	.015	.015	.015	.015	.022	.032	.032	.032

RECOMMENDED BEADED HOLE SIZES FOR DOWEL PINS

PRESS FIT	MAX.	MIN.	.0696	.0907	.1062	.1217	.1328	.1440	.1551	.1662	.1773	.1884	.1995
			.0680	.0892	.1047	.1202	.1313	.1425	.1536	.1647	.1758	.1869	.1980

1. LENGTH	DASH NUMBER												
1/4	-1	-14	-35	-55	-77	-98	-119	-140	-162	-183	-205	-226	-247
5/16	-2	-15	-36	-56	-78	-99	-120	-141	-163	-184	-206	-227	-248
3/8	-3	-16	-37	-57	-79	-100	-121	-142	-164	-185	-207	-228	-249
7/16	-4	-17	-38	-58	-80	-101	-122	-143	-165	-186	-208	-229	-250
1/2	-5	-18	-39	-59	-81	-102	-123	-144	-166	-187	-209	-230	-251
9/16	-6	-19	-40	-60	-82	-103	-124	-145	-167	-188	-210	-231	-252
5/8	-7	-20	-41	-61	-83	-104	-125	-146	-168	-189	-211	-232	-253
11/16	-8	-21	-42	-62	-84	-105	-126	-147	-169	-190	-212	-233	-254
3/4	-9	-22	-43	-63	-85	-106	-127	-148	-170	-191	-213	-234	-255
13/16	-10	-23	-44	-64	-86	-107	-128	-149	-171	-192	-214	-235	-256
7/8	-11	-24	-45	-65	-87	-108	-129	-150	-172	-193	-215	-236	-257
15/16	-12	-25	-46	-66	-88	-109	-130	-151	-173	-194	-216	-237	-258
1	-13	-26	-47	-67	-89	-110	-131	-152	-174	-195	-217	-238	-259
1-1/8		-27	-48	-68	-90	-111	-132	-153	-175	-196	-218	-239	-260
1-1/4		-28	-49	-69	-91	-112	-133	-154	-176	-197	-219	-240	-261
1-3/8		-29	-50	-70	-92	-113	-134	-155	-177	-198	-220	-241	-262
1-1/2		-30	-51	-71	-93	-114	-135	-156	-178	-199	-221	-242	-263
1-5/8		-31	-52	-72	-94	-115	-136	-157	-179	-200	-222	-243	-264
1-3/4		-32	-53	-73	-95	-116	-137	-158	-180	-201	-223	-244	-265
1-7/8		-33	-54	-74	-96	-117	-138	-159	-181	-202	-224	-245	-266
2		-34	-55	-75	-97	-118	-139	-160	-182	-203	-225	-246	-267
2-1/4								-161	-183	-204	-226	-247	-268
2-1/2								-162	-184	-205	-227	-248	-269

CURRENT DESIGN ACTIVITY CASE CODE 19204
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07804-5000

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING AUG 13, 1964		DEPT OF THE ARMY ROCK ISLAND ARSENAL ROCK ISLAND, IL 61201	
YP	55,000	105MM, M140		DRAFTSMAN	CHECKER	PIN, DOWEL	
TS	MIN	K10905448 MT, COMB GUN		TRACER	CHECKER		
EL 2		C 7124975 8" HC, MI		ENGINEER	ENGINEER		
RA		NEXT ASST USED ON		SUBMITTED		CODE IDENT NO. SIZE	
BH		APPLICATION		M. E. Braddock		19204 B	
RH		DO NOT APPLY PART NO.		APPROVED		8432695	
		FINAL PROTECTIVE FINISH 5.3.1.2 OR 5.3.2.2 OF MIL-STD-171		Foster E. G. Hume		SCALE NONE	

COPIES IDENT NO. 19203
2. PART NO. 7791569

6951677
C07617

Wm. J. STELLER
MORRIS STELLER

SECTION D-D

F 7791569

H-H NOLOGS ATTEM

DESTAL E
8413728

SECTION C-3

F 7791565

NOTES:
1. ALL DIMENSIONS ARE IN FEET AND INCHES.
2. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.

4. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
5. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.

6. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
7. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.

8. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
9. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.

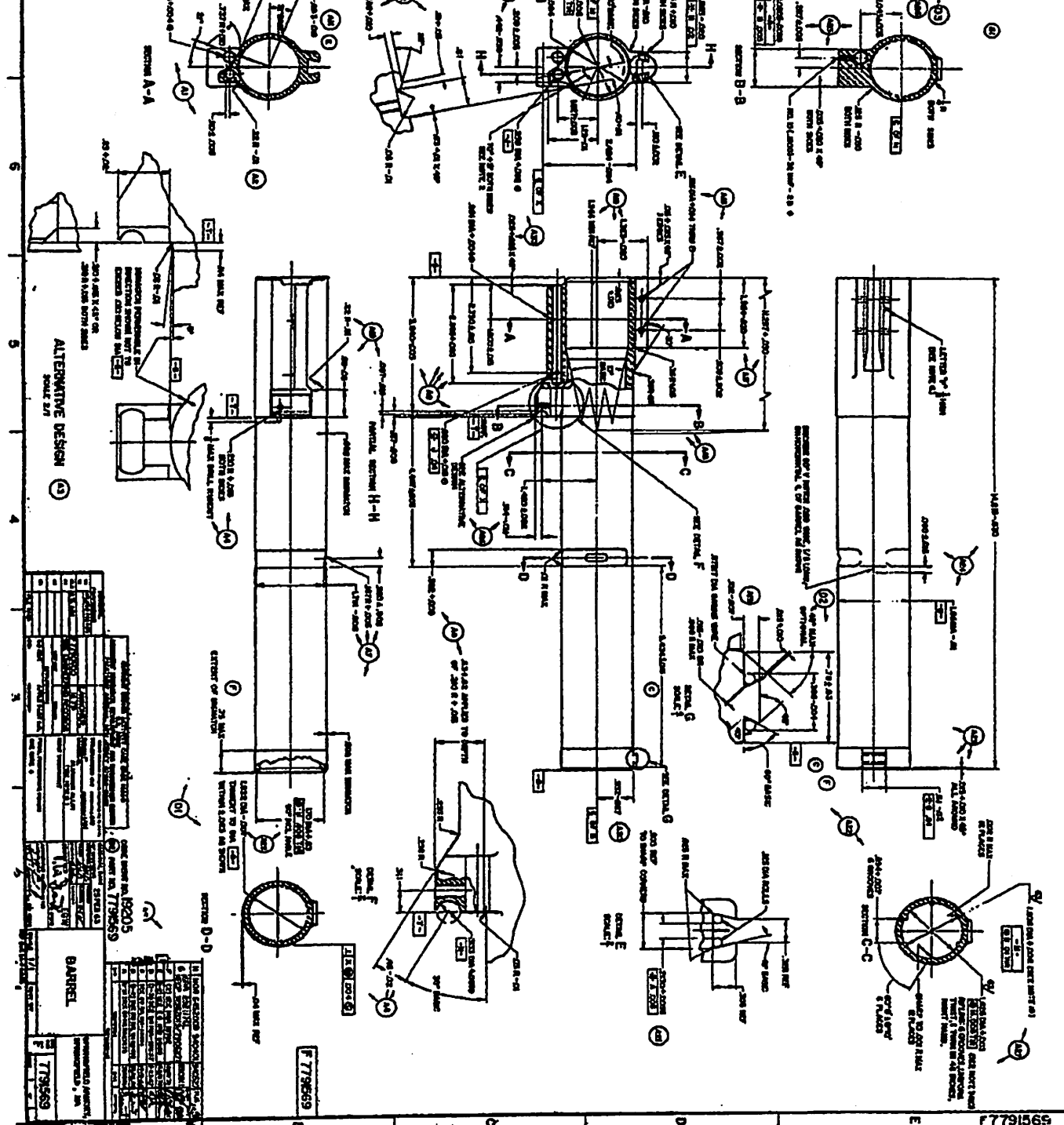
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11. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.

12. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
13. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.

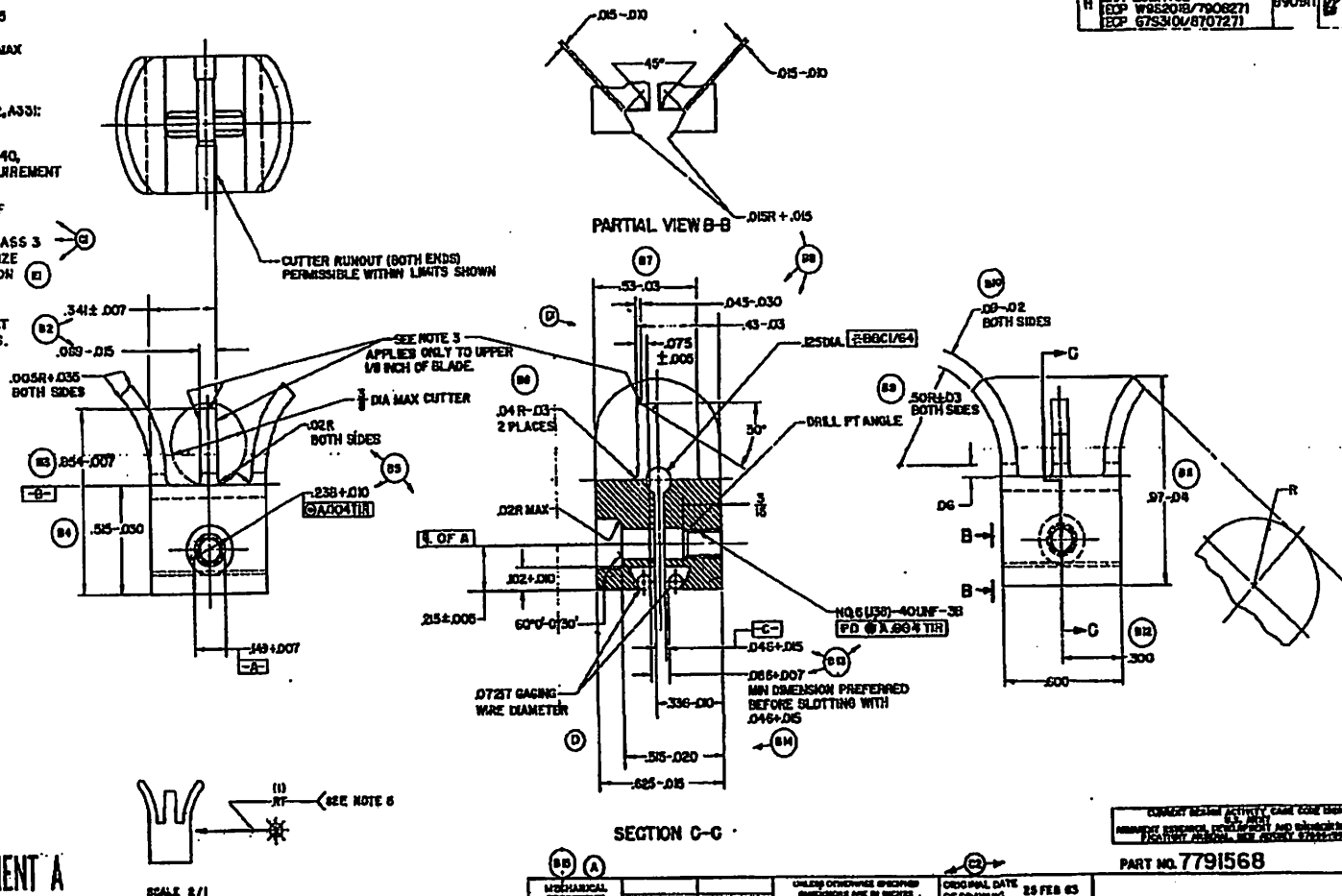
14. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
15. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.

16. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
17. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.

18. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
19. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.



- NOTES:
1. FINISH $\sqrt{\hspace{1cm}}$ WHERE MACHINED
 2. ALL EDGES SHALL BE BROKEN .005+.015 UNLESS OTHERWISE SPECIFIED.
 3. THERE EDGES TO BE SHARP TO .005R MAX AND FREE OF BURRS (SEEDS)
 4. MATERIAL:
A. FOR WROUGHT MATERIAL:
STEEL, FED. SPEC ASTM A304, A322, A331;
B640, B740, 4150 OR 4140
B. FOR PRECISION CASTING:
STEEL, SPEC MIL-S-22410; IC-B640,
IC-6735, THE TENSILE TEST REQUIREMENT IS NOT APPLICABLE.
 5. CLASSIFICATION AND INSPECTION OF PRECISION CASTINGS SHALL BE IN ACCORDANCE WITH MIL-STD-2175, CLASS 3 GRADE C, EXCEPT THAT SAMPLE SIZE FOR MAGNETIC PARTICLE INSPECTION SHALL CONFORM TO TABLE I.
 6. HEAT TREATMENT:
(FOR MATERIALS A AND B) HEAT AT 1340° TO 1580° F FOR 30 MINUTES. QUENCH IN CIRCULATING OIL. TEMPER 30 MINUTES AT HEAT TO HARDNESS SPECIFIED. HEAT TREATMENT METHOD IS FOR GUIDANCE EXCEPT THAT TIME AT TEMPERATURE SHALL NOT BE REDUCED BELOW THAT SPECIFIED.



DISTRIBUTION STATEMENT A
APPROVED FOR PUBLIC RELEASE;
DISTRIBUTION IS UNLIMITED

MECHANICAL PROPERTIES		LAUNCHER		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING		28 FEB 63	
TP	FY790600	MT9		TOLERANCES ON DIMENSIONS	±.01	FRACIONS	±.005	DECIMALS	±.01
EL				MATERIAL	SEE NOTE 4	HEAT TREATMENT	SEE NOTE 6	FINAL PROTECTIVE FINISH	SEE NOTE 6
RA				APPLICATION	SEE NOTE 6	APPROVED			
BN	RECT ASSY	SHIP ON							
RI	C30 TO 34	NO REC	APPLY PART NO.						

PART NO. 7791568		SPRINGFIELD ARMOY		SIGHT, FRONT	
Q9205	D	7791568			
SCALE	4/3	UNIT	IN	SHEET	1 OF 1

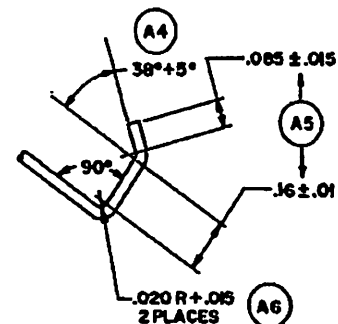
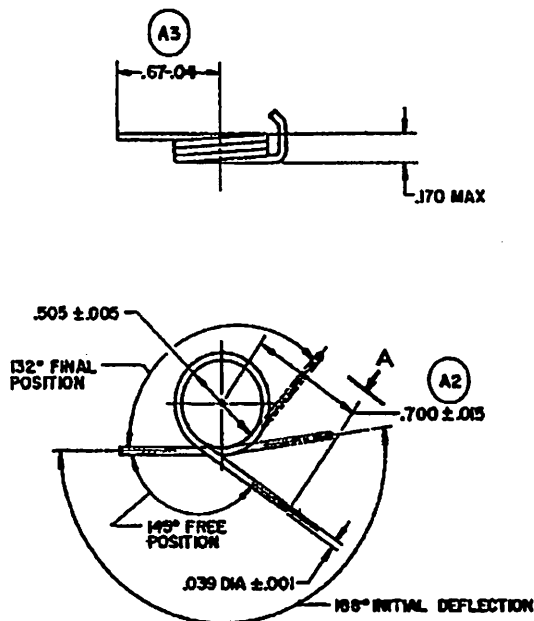
D 7791568

NOTICE—WHEN GOVERNMENT DRAWINGS SPECIFICATIONS OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN THE ORIGINAL INTENT, THE USER SHALL BE RESPONSIBLE FOR ANY INADEQUACIES OR INACCURACIES THAT MAY RESULT FROM SUCH USE. THE GOVERNMENT ASSUMES NO LIABILITY FOR ANY SUCH USE. THE GOVERNMENT WILL NOT BE RESPONSIBLE FOR ANY SUCH USE. THE GOVERNMENT WILL NOT BE RESPONSIBLE FOR ANY SUCH USE.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	(1-8) SEE E.O. NO. 8427673	30 NOV 84	<i>[Signature]</i>
B	SEE E.O. 82000	5 FEB 88	<i>[Signature]</i>
C	ERR 2921176L (ECP W9S2019/790627)	300911	<i>[Signature]</i>

(USED WITH LEVER-7790623)

NOTES:



VIEW A
SCALE 4/1

NO. OF COILS ----- 2.9 REF
MAX DEFLECTION WITHOUT SET BEYOND FINAL POSITION ----- 50° REF
DIRECTION OF HELIX ----- RH
TORQUE AT INITIAL POSITION ----- 19 LB IN ±.05 LB IN
TORQUE AT FINAL POSITION ----- 94 LB IN ±.05 LB IN
SPRING RATE ----- .011 LB IN. PER DEGREE
SPRING FUNCTIONS OVER ROD ----- .46501A MAX

CURRENT DESIGN ACTIVITY CAGE CODE 13200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07806-5000

PART NO. 7791558

SPRINGFIELD ARMOY,
SPRINGFIELD, MA

SPRING, HELICAL
TORSION

CODE IDENT D/DWG SIZE

19205

C

7791558

SCALE 2/1

UNIT WT

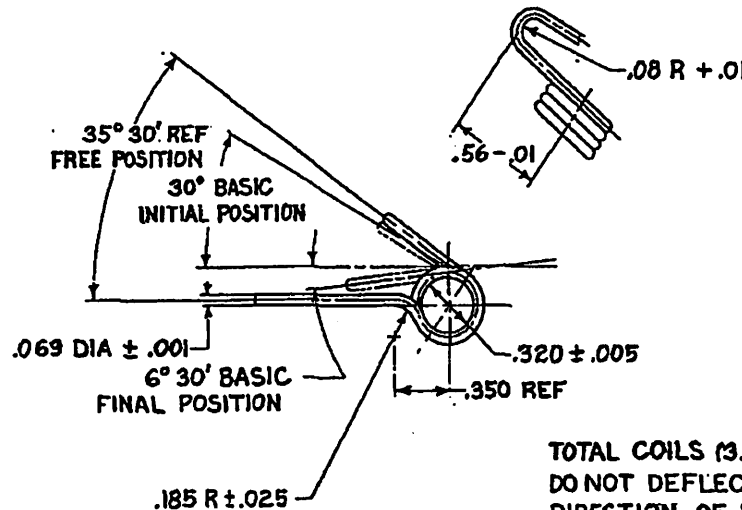
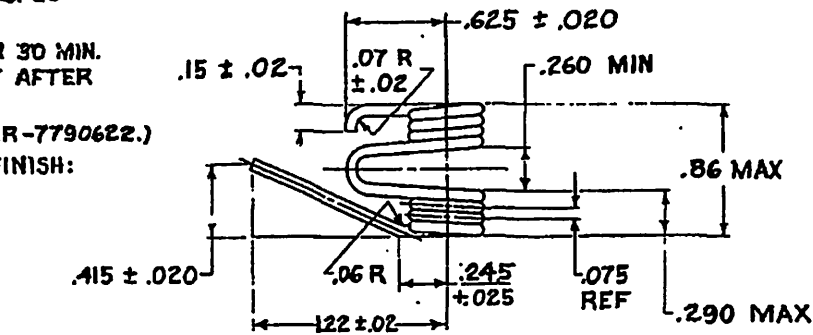
SHEET OF

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING 1 MAR 63	
YP		LAUNCHER, F7790600 M79	TOLERANCES ON DECIMALS ± FRACTIONS ± ANGLES ± 2°	DRAFTSMAN <i>[Signature]</i>	CHECKER ESW
TS				TRACER <i>[Signature]</i>	CHECKER <i>[Signature]</i>
EL. 2		SEE ENGINEERING RECORDS NEXT ASSY USED ON	MATERIAL MUSIC WIRE, STEEL SPEC QQ-W-470	ENGINEER <i>[Signature]</i>	ENGINEER
RA				SUBMITTED <i>[Signature]</i>	
BH		APPLICATION DO NOT APPLY PART NO	HEAT TREATMENT STRESS RELIEVE FOR 30 MIN AT 450 TO 475°F AFTER FORMING FINAL PROTECTIVE FINISH	APPROVED <i>[Signature]</i>	
RH					

NOTE:

1. MUSIC WIRE, STEEL, SPEC QQ-W-470.
2. STRESS RELIEVE FOR 30 MIN. AT 450° TO 475°F AFTER FORMING.
3. (USED WITH HAMMER-7790622.)
4. FINAL PROTECTIVE FINISH: LUBRICATING OIL, SPEC VV-L-800.

(C1)



TOTAL COILS (3.5 EACH END) _____ 7 REF
 DO NOT DEFLECT BEYOND FINAL POSITION
 DIRECTION OF HELIX _____ AS NOTED
 TORQUE AT INITIAL POSITION _____ 1.5 LB IN. ± .5 LB IN.
 TORQUE AT FINAL POSITION _____ 11.5 LB IN. ± 15 LB IN.
 SPRING RATE _____ 27 LB IN. PER DEGREE/REF
 SPRING FUNCTIONS OVER ROD _____ .264 MAX

(C2)

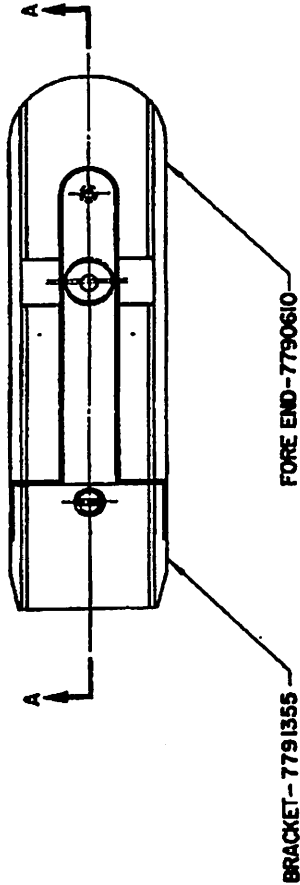
REVISIONS				
NO	ZONE	LTR	DESCRIPTION	DATE
B			REPLACES REVA W/CHG	
			SEE EO RIA-14010	2-28-67
C			SEE EO. 82000	5 FEB 68
D			ERR Z9Z11761 (ECP W9S2019/790627)	890911

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING JUL 31, 1962		SPRINGFIELD ARMORY, SPRINGFIELD, MA	
TP		TOLERANCES ON DECIMALS		PROFESSOR	ENGINEER	SPRING, HELICAL TORSION	
TS		FRACTIONS		MEW	REK		
EL 2		ANGLES ± .010		B.C. Emma	EDW		
RA		MATERIAL		REK	N.W.G.		
BH		SEE NOTE 1		SUBMITTED		DWG SIZE C	
RH		SEE NOTE 2		Y.A. LUUKKONEN		CODE IDENT NO. 19205	
APPLICATION		SEE NOTE 4		APPROVED H.F. LYNCH		7791451	
						SCALE 2/1 UNIT WT SHEET OF	

C7791354

NOTES:

1.



SCREW - MS35494-33

(B2)



SECTION A-A

SCREW - 7791227

TIGHTENING TORQUE:
10 TO 15 IN. LB

FOR LIST OF PARTS,
SEE ENGINEERING PARTS LIST 7791354

PHYSICAL PROPERTIES		TOLERANCES ON DIMENSIONS		MATERIAL		HEAT TREATMENT		FINAL PROTECTIVE FINISH	
17	LAUNCHER	18	LAUNCHER	19	LAUNCHER	20	LAUNCHER	21	LAUNCHER
22	7790610	23	7790610	24	7790610	25	7790610	26	7790610
27	SEE ENGINEERING RECORDS	28	SEE ENGINEERING RECORDS	29	SEE ENGINEERING RECORDS	30	SEE ENGINEERING RECORDS	31	SEE ENGINEERING RECORDS
32	DO NOT APPLY PART NO.	33	DO NOT APPLY PART NO.	34	DO NOT APPLY PART NO.	35	DO NOT APPLY PART NO.	36	DO NOT APPLY PART NO.

CODE IDENT NO. 19205
PART NO. 7791354

ORIGINAL DATE 15 FEB 62		REVISIONS	
1	15 FEB 62	2	15 FEB 62
3	15 FEB 62	4	15 FEB 62
5	15 FEB 62	6	15 FEB 62
7	15 FEB 62	8	15 FEB 62
9	15 FEB 62	10	15 FEB 62
11	15 FEB 62	12	15 FEB 62
13	15 FEB 62	14	15 FEB 62
15	15 FEB 62	16	15 FEB 62
17	15 FEB 62	18	15 FEB 62
19	15 FEB 62	20	15 FEB 62
21	15 FEB 62	22	15 FEB 62
23	15 FEB 62	24	15 FEB 62
25	15 FEB 62	26	15 FEB 62
27	15 FEB 62	28	15 FEB 62
29	15 FEB 62	30	15 FEB 62
31	15 FEB 62	32	15 FEB 62
33	15 FEB 62	34	15 FEB 62
35	15 FEB 62	36	15 FEB 62
37	15 FEB 62	38	15 FEB 62
39	15 FEB 62	40	15 FEB 62
41	15 FEB 62	42	15 FEB 62
43	15 FEB 62	44	15 FEB 62
45	15 FEB 62	46	15 FEB 62
47	15 FEB 62	48	15 FEB 62
49	15 FEB 62	50	15 FEB 62

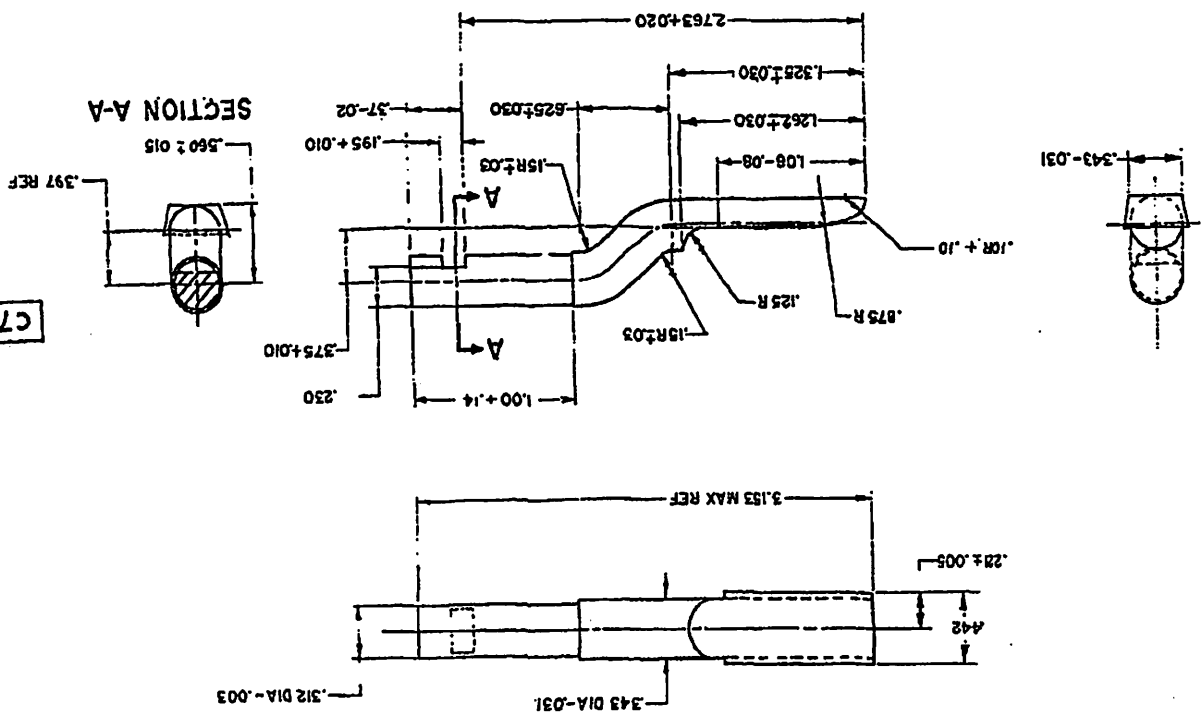
DEPARTMENT OF THE ARMY
SPRINGFIELD ARMORY,
SPRINGFIELD, MASS.
7791354

SCALE 1/1 UNIT WT

REF DES 24-64034

CURRENT DESIGN ACTIVITY CODE 15000
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PACHTOWN ARSENAL, NEW JERSEY 07003-5000

C7791354



NOTICE.—When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have furnished, furnished, or in any way supplied the said drawings, specifications or other data is not to be regarded by implication or otherwise as in any manner endorsing the holder or any other person or corporation, or assuming any rights or protection to infringement, use, or sell any patented invention that may in any way be related thereto.

PHYSICAL PROPERTIES		DO NOT DO	APPLY PART NO. AS SPECIFIED	REVISIONS			
YP		APPLICATION		SYM	DESCRIPTION	DATE	APPROVAL
TS		NEXT ASSY	USED ON	A	(1-2)SEE EO NO. SA27673	30NOV64	<i>Grant</i>
EL2		C7791354	LAUNCHER	B	(1-2)SEE EO NO. SA29433	22JUL66	<i>Grant</i>
RA		F7790600	M79	C	(1) SEE EO 82000	5 FEB68	<i>B. Hebeale</i>
BH				D	ERR Z9Z1176L (ECP W9S2019/790527)	890911	<i>Grant</i>
RH	C33-38						

(USED WITH SWIVEL ASSY-6147721)

NOTES:

1. MATERIAL: STEEL, CARBON, 1040, 1038, PER ASTM A545, A546
2. HEAT TREATMENT: HEAT AT 1550° TO 1600° F. OIL QUENCH. TEMPER 20 MINUTES MINIMUM AT HEAT TO HARDNESS SPECIFIED. HEAT TREATMENT METHOD IS FOR GUIDANCE EXCEPT THAT TIME AT TEMPERATURE SHALL NOT BE REDUCED BELOW THAT SPECIFIED.

A2

- 3 MIL-W-13855 APPLIES.

TYPE I, STYLE 2S OF SPEC FF-S-92, NO. 8 (.164)-36 NF-2A X 3/4 LONG. SPEC FF-S-92 SHALL APPLY FOR ALL REQUIREMENTS NOT SPECIFIED HEREON.

CURRENT DESIGN ACTIVITY CASE CODE 19205
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07806-5000

A1

CODE IDENT NO. 19205
PART NO. 7791227

B2

C

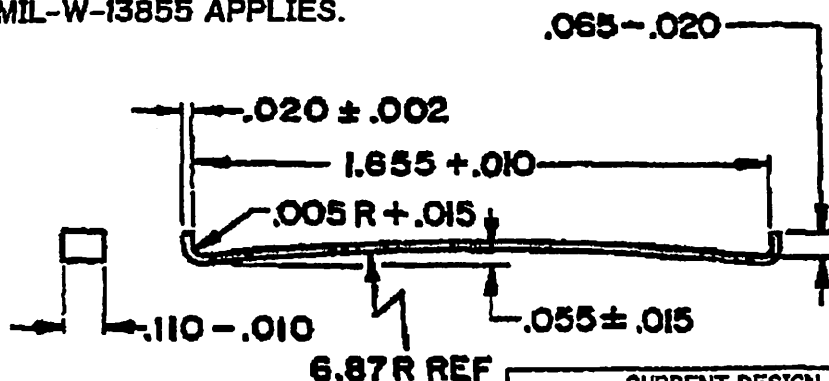
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES	ORIGINAL DATE OF DRAWING	21 APR 61		SCREW, MACHINE, FLAT COUNTERSUNK HEAD	DEPT OF THE ARMY SPRINGFIELD ARMORY SPRINGFIELD, MA	
	DRAWNMAN	NEW	CHECKED			DT
	TRACER	NEW	CHECKED			REK
	ENGINEER	REK	APPROVED			REK
MATERIAL SEE NOTE 1	SUBMITTED	<i>Va. Leukkonen</i>		SCALE	DWG SIZE A	
HEAT TREATMENT SEE NOTE 2	APPROVED BY, ORIGIN OF THE CARTON OF ORIGIN	<i>A. J. G. G. G.</i>				
FINAL PROTECTIVE FINISH FINISH NO. 5.3.1.2 OF MIL-STD-171				UNIT WT	7791227	
					SHEET 1 OF 1	

NOTICE: When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement transaction, the United States Government hereby disclaims any responsibility, whether or not the Government may have furnished, furnished, or in any way supplied the said drawings, specifications, or other data, and is not to be regarded by implication or otherwise as in any manner endorsing the holder or any other person or organization, or conveying any rights or permission to manufacture, use, or sell any product or process that may in any way be related thereto.

PHYSICAL PROPERTIES		DO NOT -DS-	APPLY PART NO. -AS-SPECIFIED-	REVISIONS			
YP		APPLICATION		BY	DESCRIPTION	DATE	APPROVAL
TS		NEXT ASSY	USED ON	H	NOR G3S4429 931115 (ECP G4S4132 940415)	950214	HJS
EL		D7791038	LAUNCHER:				
RA			M79				
SH		E3269545	MK19, MOD3				
PH	30N 62T067		40MM MG				

NOTES:

1. FINISH 125/
2. EDGES SHALL BE BROKEN
.005 R MAX AND FREE FROM BURRS.
3. HEAT TREATMENT: AUSTENITIZE, QUENCH AND TEMPER
PER MIL-H-6875 TO HARDNESS SPECIFIED.
4. FINAL PROTECTIVE FINISH:
FINISH 3.3.1 OF MIL-STD-171 WITH
VV-L-800 SUPPLEMENTARY OIL
TREATMENT.
5. MIL-W-13855 APPLIES.



CURRENT DESIGN ACTIVITY CAGE CODE 19200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07806-5000

CODE IDENT NO. 19205

PART NO. 7791200

UNLESS OTHERWISE SPECIFIED	ORIGINAL DATE OF DRAWING 20 APR 61	<h1> SPRING, SIGHT FRAME </h1>	DEPT OF THE ARMY SPRINGFIELD ARMORY SPRINGFIELD, MA
DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES	DRAWN BY NEW CHECKED EBY TRACER NEW CHECKED R&K SUBMITTED <i>V.A. Lunkhoun</i> CDS CORPS		
MATERIAL STEEL, STRIP, SPEC AMS G453, AMS B121, ASTM A231 OR ASTM A232	APPROVED BY CHIEF OF THE OFFICE OF ORDNANCE <i>H.J. Lunkhoun</i> CDS CORPS		
HEAT TREATMENT SEE NOTE 3	SCALE 2/1 UNIT WT		
FINAL PROTECTIVE FINISH SEE NOTE 4		DWG SIZE A	7791200 SHEET 1 OF 1

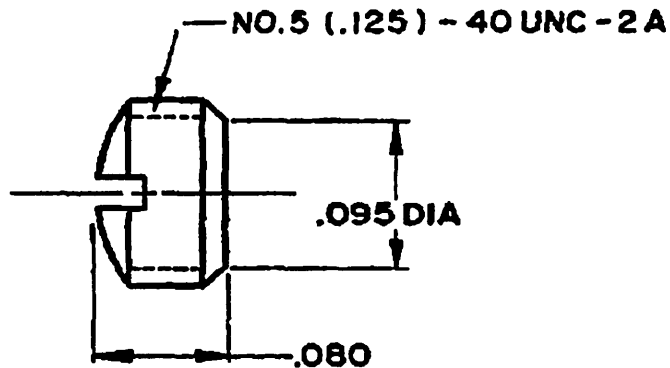
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PHYSICAL PROPERTIES		DO NOT -B-	APPLY PART NO. -AS-SPECIFIED-	REVISIONS			
YP		APPLICATION		SYM	DESCRIPTION	DATE	APPROVAL
TE		NEXT ARMY	USED ON	A	(1-4) SEE EO NO. SA27673	30 NOV 64	<i>G. B. [unclear]</i>
EL2		D7791038	LAUNCHER:	B	(1) SEE EO 82000	5 FEB 68	<i>P. [unclear]</i>
FA			M79	C	ERR Z9Z1175AK (ECP W9S2019/790629)	890913	<i>21.5" [unclear]</i>
OH		E3269545	MK 19, MOD 3	D	ERR Z9Z1306R (ECP 60S3067, 90-07-27)	91-03-13	<i>[unclear]</i>
PH	SEE NOTE 1		40MM MG				

NOTES:

1. MATERIAL AND HARDNESS:
STEEL, CARBON OR ALLOY,
AND HARDNESS AS SPECIFIED
IN SPEC FF-S-210.

A1



A4

TYPE II, STYLE I OF SPEC FF-S-210,
NO. 5 (.125) - 40 UNC - 2 A. LENGTH, POINT DIA AND FINAL
PROTECTIVE FINISH SHALL BE AS SPECIFIED HEREON.

A2

A3

CODE IDENT NO. 19205

PART NO. 7791199

C

CURRENT DESIGN ACTIVITY CAGE CODE 19200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PACAFHAF ARSENAL NEW JERSEY 07806-5000

UNLESS OTHERWISE SPECIFIED	ORIGINAL DATE OF DRAWING 20 APR 61	SET SCREW, HEADLESS, SLOTTED	SPRINGFIELD ARMORY, SPRINGFIELD, MA. 01101		
DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ±.010	DRAFTSMAN <i>[initials]</i> CHECKER <i>[initials]</i> TRACER <i>[initials]</i> ENGINEER <i>[initials]</i> EDC <i>[initials]</i> EDC <i>[initials]</i> SUBMITTED <i>[signature]</i> ORG CORPS				
MATERIAL SEE NOTE 1	APPROVED BY ORDER OF THE <i>[signature]</i> ORG CORPS			SCALE 10 / 1 UNIT WT	DWG SIZE A
HEAT TREATMENT					SHEET 1 OF 1
FINAL PROTECTIVE FINISH FINISH NO. 5.3.1.2 OF MIL-STD-171					

DD FORM 1175

1. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS ARE TO BE TAKEN FROM THE CENTER OF GRAVITY UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE TO BE TAKEN FROM THE CENTER OF GRAVITY UNLESS OTHERWISE SPECIFIED.
4. ALL DIMENSIONS ARE TO BE TAKEN FROM THE CENTER OF GRAVITY UNLESS OTHERWISE SPECIFIED.

ERR 292106R
G (ECP GOS3067 50-07-27) 91031E
(ECP GOS4496 51-01-22)

6201677B

REV

REV	DESCRIPTION	DATE	BY
A	0-01 SEE DD NO 1437673	04/04/67	1551 M
B	0-01 SEE DD NO 1437673	04/04/67	1551 M
C	0-01 SEE DD NO 1437673	04/04/67	1551 M
D	0-01 SEE DD NO 1437673	04/04/67	1551 M
E	ERR 2921175 AK (ECP W952019/790629)	09/09/63	1551 M
F	ERR 2921226C (ECP G652025/690321)	09/09/63	1551 M

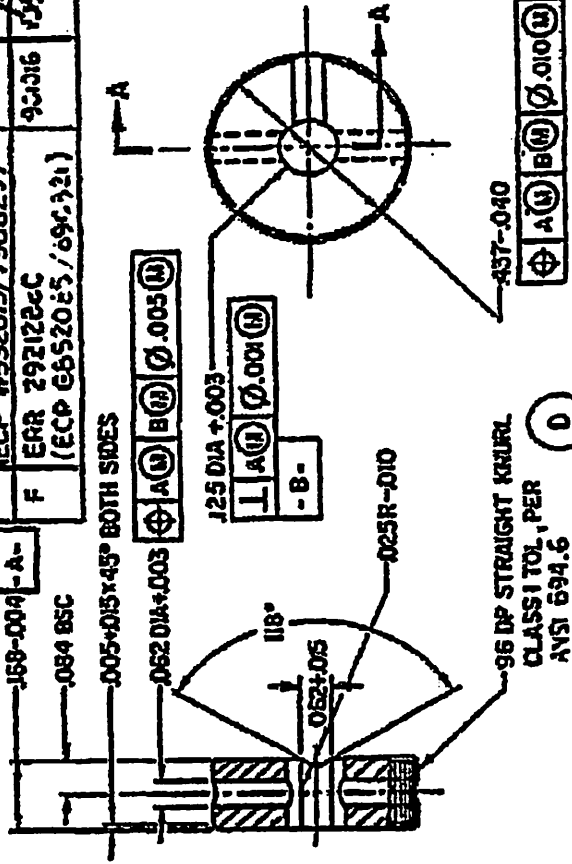
NOTES

1. FINISH 125

2. ALL EDGES SHALL BE BROKEN .005+.010 UNLESS OTHERWISE SPECIFIED.

3. HEAT TREATMENT: CARBURIZE AT 1575°F TO 1500°F TO CASE DEPTH .005 TO .012. OIL QUENCH. TEMPER AT 350°F FOR 30 MIN TO HARDNESS SPECIFIED. HEAT TREATMENT METHOD IS FOR GUIDANCE EXCEPT THAT TIME AT TEMPERATURE SHALL NOT BE REDUCED BELOW THAT SPECIFIED.

4. FINAL PROTECTIVE FINISH NO. 531.2 OF MIL-STD-171



PARTIAL SECTION A-A

CURRENT DESIGN ACTIVITY CASE 606 19500
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PACIFIC AIR FORCE, HAFB, HAWAII 96119

(A5) CODE IDENT NO. 19205
(B2) PART NO. 7791029

DATE	REVISION	DESCRIPTION	APPROVED	DATE
19 SEP 60	1	ORIGINAL DATE OF DRAWING		
19 SEP 60	2	REVISIONS		
19 SEP 60	3	REVISIONS		
19 SEP 60	4	REVISIONS		
19 SEP 60	5	REVISIONS		
19 SEP 60	6	REVISIONS		
19 SEP 60	7	REVISIONS		
19 SEP 60	8	REVISIONS		
19 SEP 60	9	REVISIONS		
19 SEP 60	10	REVISIONS		
19 SEP 60	11	REVISIONS		
19 SEP 60	12	REVISIONS		
19 SEP 60	13	REVISIONS		
19 SEP 60	14	REVISIONS		
19 SEP 60	15	REVISIONS		
19 SEP 60	16	REVISIONS		
19 SEP 60	17	REVISIONS		
19 SEP 60	18	REVISIONS		
19 SEP 60	19	REVISIONS		
19 SEP 60	20	REVISIONS		

SPRINGFIELD ARMOYRY SPRINGFIELD, MA 01011	7791029
WHEEL, ELEVATING	
DATE 4/1	UNIT WT
1551 M	1

RMH REF 948 42576

NOTES:

1. MATERIAL:

WIRE, MUSIC, ASTM-A228.

2. HEAT TREATMENT:

STRESS RELIEVE AT 450°F ± 10°
FOR 20 MIN, AFTER FORMING.

3. FINAL PROTECTIVE FINISH:

LUBRICATING OIL, SPEC MIL-L-3180

4. TO WORK IN ----- .062 IN (MIN) DIA BORE.

5. MIL-W-13855 APPLIES.

OUTSIDE DIA SOLID, NOT MORE THAN _____ .060
INSIDE DIA FREE, NOT LESS THAN _____ .024
ASSEMBLED HEIGHT BASIC _____ .220
LOAD AT ASSEMBLED HEIGHT _____ 1.7 ± .17 LBS
SOLID HEIGHT, NOT MORE THAN _____ .190
DIA OF WIRE (APPROX) _____ .014
FREE HEIGHT (APPROX) _____ .244
NUMBER OF COILS (APPROX) _____ 12
DIRECTION OF COILING _____ OPTIONAL
ENDS CLOSED AND GROUND-FLAT
OPERATING HEIGHT BASIC _____
LOAD AT OPERATING HEIGHT _____
SPRING RATE (REF) _____ TO LB/IN
MANUFACTURE IN ACCORDANCE WITH MIL-S-13572, TYPE I, GRADE B.

(USED WITH PLUNGER - 7791022)

PART NO. 7791028

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING 9 SEP 60		SPRINGFIELD ARMORY, SPRINGFIELD, MA	
TP		TOLERANCES ON	DECIMALS XXX 2	DESIGNED BY	CCN	SPRING, HELICAL	
TS		ANGLES	XXX 4	TESTED BY	CCN		
EL 2	E3269545	MATERIAL		SUBMITTED BY	CCN		
RA	07791038	HEAT TREATMENT	SEE NOTE 1	APPROVED BY	CCN		
BN	C7791015	FINAL PROTECTIVE FINISH	SEE NOTE 2	DRG SIZE		CODE IDENT NO.	7791028
BR	APP	APPLICATION	SEE NOTE 3	B		19205	
				SCALE		UNIT WT	SHEET 1 OF 1

SWERD FORM 40B, 1 MAR 67

REVISIONS				
NO	DATE	DESCRIPTION	DATE	APPROVED
1		REDRAWN & REVISED W/CHANGE SEE EOB2000	5 FEB 68	G. Hebert
2		ERR 2921175AT (ECP W952019/790627) (ECP G552085/890320)	890913	SEE: C-7
3		ERR 2921306R (ECP G053067, 90-07-27) (ECP G054496, 91-01-22)	91-03-13	

B 7791028

C

4

B

NOTES:

1. MATERIAL:
WIRE, MUSIC, ASTM-A228.
2. HEAT TREATMENT:
STRESS RELIEVE AT 450°F ± 10°
FOR 20 MIN, AFTER FORMING.
3. FINAL PROTECTIVE FINISH:
LUBRICATING OIL, SPEC MIL-L-3150.
4. TO WORK IN ----- .100 IN. (MIN) DIA BORE.
5. MIL-W-13855 APPLIES.

OUTSIDE DIA SOLID, NOT MORE THAN _____ .097
 INSIDE DIA FREE, NOT LESS THAN _____ .048
 ASSEMBLED HEIGHT BASIC _____ .65
 LOAD AT ASSEMBLED HEIGHT _____ 4.0 ± .4 LBS
 SOLID HEIGHT, NOT MORE THAN _____ .560
 DIA OF WIRE (APPROX) _____ .018
 FREE HEIGHT (APPROX) _____ .937
 NUMBER OF COILS (APPROX) _____ 30
 DIRECTION OF COILING _____ OPTIONAL
 ENDS CLOSED AND GROUND FLAT
 OPERATING HEIGHT BASIC _____
 LOAD AT OPERATING HEIGHT _____
 SPRING RATE (REF) _____ 14. LB/IN
 MANUFACTURE IN ACCORDANCE WITH MIL-S-13572, TYPE I, GRADE B.

CURRENT DESIGN ACTIVITY CASE CODE 18380
 U.S. ARMY
 ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
 PICATUNNY ARSENAL, NEW JERSEY 07804-5000

(USED WITH RETAINER-7791023)

PART NO. 7791027

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING 9 SEP 60		SPRINGFIELD ARMORY, SPRINGFIELD, MA	
YP		TOLERANCES ON DECIMALS .XX ± .XXX ±		DRAFTSMAN CCN	CHECKER EDW	SPRING, HELICAL	
TS		ANGLES ± .XXX ±		TRAINER R. Wilson	CHECKER R. Wilson		
EL 2	E3269545	MATERIAL SEE NOTE 1		SUBMITTED Philip E. Heberle		DWG SIZE B	CODE IDENT NO. 19205
RA	D7791038	HEAT TREATMENT SEE NOTE 2		APPROVED R. J. Henry		7791027	
BH		FINAL PROTECTIVE FINISH SEE NOTE 3				SCALE	UNIT WT
RH		APPLICATION				SHEET 1 OF 1	

D: B7791027

C

B

A

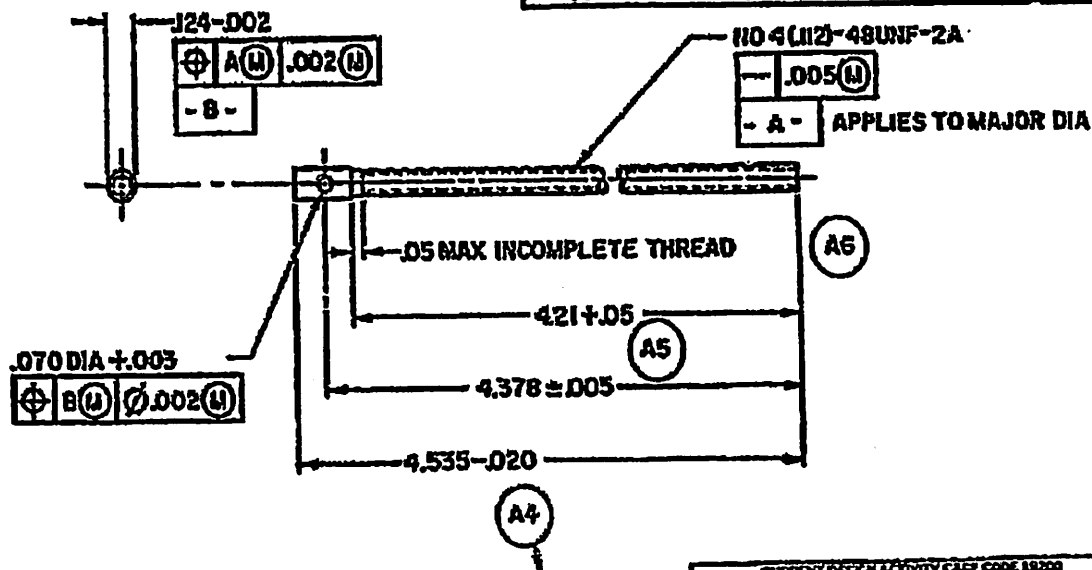
11/11/2023



RMH
NOT A-64870

I. FINISH 125/

2. ALL EDGES SHALL BE BROKEN .005+.010 UNLESS OTHERWISE SPECIFIED.
3. HEAT TREATMENT: BEFORE THREADING, HEAT AT 1500° TO 1550° F OIL QUENCH. TEMPER 30 MIN TO HARDNESS SPECIFIED. HEAT TREATMENT METHOD IS FOR GUIDANCE EXCEPT THAT TIME AT TEMPERATURE SHALL NOT BE REDUCED BELOW THAT SPECIFIED.



CURRENT DESIGN ACTIVITY CASE CODE 18200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PIEDMONT ARSENAL, NEW JERSEY 07806-5000

PART NO. 7791025

[illegible]

RMH

REV	DESCRIPTION	DATE	BY
A	(1-8) SEE ED NO. SA27673	8/2/64	W. J. J.
B	(1) SEE ED NO. SA29435	2/2/65	W. J. J.
C	SEE ED - 82000	5 FEB 66	W. J. J.
D	(3) SEE ERR NGR 20693	8 MAR 73	W. J. J.
E	ERR Z9Z1175AU (ECP W9S2019/790627) (ECP W3S2008/830520)	8/9/91	W. J. J.

B7791024

F	ERR Z9Z1306R (ECP G0S3067, 90-07-27) (ECP G0S4496, 91-01-22)	91-03-13
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(D)

NOTES:

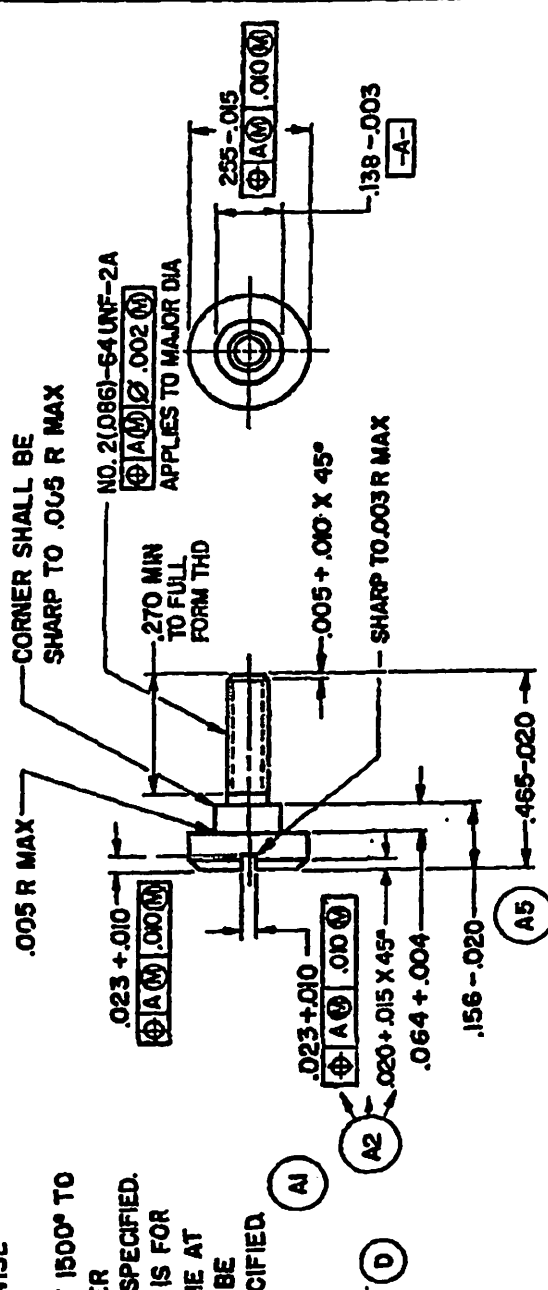
1. FINISH 125/

2. ALL EDGES SHALL BE BROKEN

.005 ± .010 UNLESS OTHERWISE SPECIFIED.

3. HEAT TREATMENT: HEAT AT 1500° TO 1550° F. OIL QUENCH. TEMPER 30 MINUTES TO HARDNESS SPECIFIED. HEAT TREATMENT METHOD IS FOR GUIDANCE EXCEPT THAT TIME AT TEMPERATURE SHALL NOT BE REDUCED BELOW THAT SPECIFIED.

4. MIL-W-13855 APPLIES.



CURRENT DESIGN AUTHORITY CASE CODE 15500
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PLANTWY ARSENAL, NEW JERSEY 07005-5000

PART NO. 7791024 (C)

(A3) (A4) (D) (BI) (A5) (A6)

E3269545	40MM MG	PHYSICAL PROPERTIES	UNLESS OTHERWISE SPECIFIED	ORIGINAL DATE OF DRAWING	9 SEP 60
D7791038	LAUNCHER	TEMP	DIMENSIONS ARE IN INCHES	DESIGNED BY	W. J. J.
SEE ENGRG RECORDS	M79	TENS	TOLERANCES UNLESS OTHERWISE SPECIFIED	CHECKED BY	W. J. J.
DO NOT REUSE	SEE ENGRG RECORDS	ELONG	MATERIAL	STEEL, ASTM-A103	W. J. J.
APPLICATION	LAUNCHER	HAZ	HEAT TREATMENT	1144 G11379/141	W. J. J.
APPLY PART NO.	7791024	FIN	SEE NOTE 3	APPROVED BY	W. J. J.
NO. OF PARTS	1	FINISH	FINISH NO. 5.3.1.2 OF MIL-STD-171	DATE	9 SEP 60

SPRINGFIELD
ARMORY
SPRINGFIELD MA.
01101

7791024
B
SHEET 1 OF 1

RMH REF SA-B42876

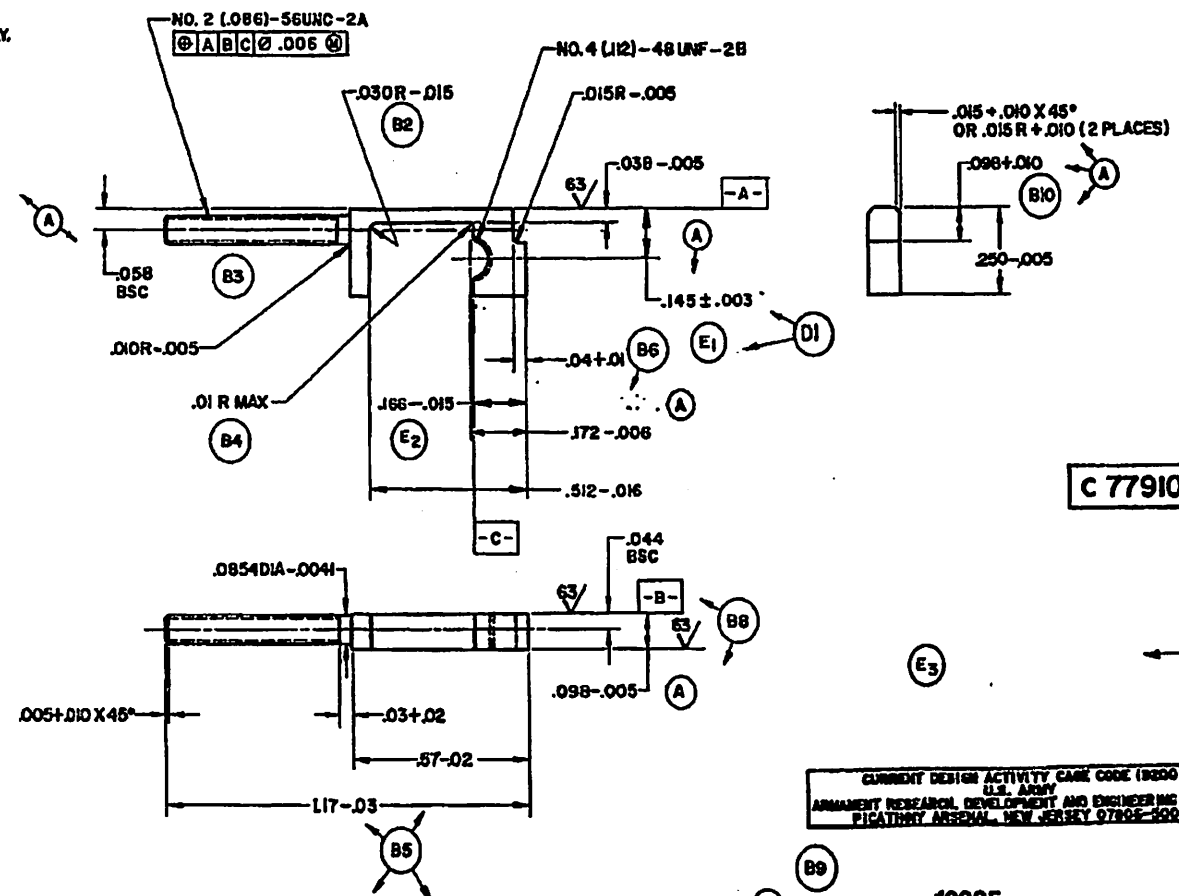
THIS DRAWING IS THE PROPERTY OF THE U.S. ARMY. IT IS TO BE USED FOR THE DESIGN AND CONSTRUCTION OF THE RETAINER, APERTURE. IT IS TO BE USED FOR THE DESIGN AND CONSTRUCTION OF THE RETAINER, APERTURE. IT IS TO BE USED FOR THE DESIGN AND CONSTRUCTION OF THE RETAINER, APERTURE.

NOTES:

1. FINISH $\sqrt{125}$ EXCEPT AS NOTED.
2. ALL EDGES, EXCEPT THREADS, SHALL BE BROKEN .003+.010 UNLESS OTHERWISE SPECIFIED.
3. HEAT TREATMENT: BEFORE MACHINING, HEAT AT 1525° TO 1575°F. OIL QUENCH. TEMPER TO HARDNESS SPECIFIED. HEAT TREATMENT METHOD IS FOR GUIDANCE ONLY.

(B1) (D3)

REV	DESCRIPTION	DATE	APPROVAL
A	SEE ED NO. 8428890	MAR 63	
B	(1-10) SEE ED NO. 8427773	NOV 64	
C	(1-2) SEE ED NO. 8428430	22 JUL 64	
D	(1-3) SEE TO RIA-14000	15 FEB 67	
E	(1-3) SEE EQ 82000	5 FEB 68	
F	ERR Z9Z1175AK (ECP W9S2019/790629)	890913	
G	ERR Z9Z1306R (ECP 60S3067, 90-07-27) (ECP 60S4486, 91-01-22)	91-03-13	



CURRENT DESIGN ACTIVITY CASE CODE (9200)
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATUNNY ARSENAL, NEW JERSEY 07805-5000

(A) CODE IDENT NO. 19205
(C) PART NO. 7791023

PHYSICAL PROPERTIES	E3269545	MK19, MOD 3, 40MM MG LAUNCHER, M 79	OTHER PROPERTIES (SPECIFIED DIMENSIONS AND IN NOTES)	ORIGINAL DATE OF DRAWING	9 SEP 60
TO	07791038		TOLERANCES ON DIMENSIONS UNLESS 2 P SPECIFIED	APPROVED BY	ENGINEER EDW
EL			MATERIAL STEEL, ASTM A304, A322, A331 4130, THRU 4150	DESIGNED BY	DESIGNED BY
SA			HEAT TREATMENT	REVIEWED BY	REVIEWED BY
BA				SUBMITTED BY	SUBMITTED BY
MA				APPROVED BY	APPROVED BY
DA	A6610 69		SEE NOTE 3	APPROVED BY	APPROVED BY
EA			FINAL PROTECTIVE FINISH FINISH NO. 6.3.1.2 OF MIL-STD-171	APPROVED BY	APPROVED BY

RETAINER,
APERTURE

SPRINGFIELD ARMOY
SPRINGFIELD, MA 01101

7791023

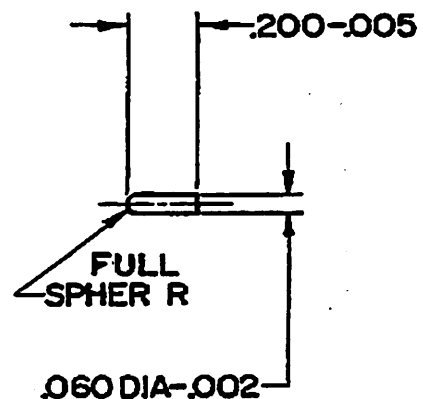
REF 84-848880

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PHYSICAL PROPERTIES		DO NOT -DO-	APPLY PART NO. -AS-SPECIFIED-	REVISIONS			
YP		APPLICATION		SYM	DESCRIPTION	DATE	APPROVAL
TS		NEXT ASSY	USED ON	A	(1-3) SEE EO NO. SA27673	30 NOV 64	<i>Grant</i>
EL2		SEE ENGRG RECORDS		B	(1) SEE EO NO. SA29433	22 JUL 66	<i>Grant</i>
RA		LAUNCHER		C	(1-2) SEE EO RIA-14096	7-21-67	<i>aga</i>
BH		C7791015	GRENADE	D	ERR Z9Z1175AU (ECP W9S2019/790627) (ECP W3S2008/830520)	890913	<i>OB</i>
RH		D7791038	M79	E	ERR Z9Z1306R (ECP 60S3067, 90-07-27) (ECP 60S4496, 91-01-22)	91-03-13	<i>WMA</i> <i>K. L. L. L.</i>
45N	66-72	E3269545	MK19 MOD 3 40MM MG				

NOTES:

1. FINISH ∇
2. ALL EDGES SHALL BE BROKEN .005 MAX UNLESS OTHERWISE SPECIFIED.
3. HEAT TREATMENT: HEAT AT 1500° TO 1525°F. WATER QUENCH. TEMPER TO HARDNESS SPECIFIED. HEAT TREATMENT METHOD IS FOR GUIDANCE ONLY.
4. FINAL PROTECTIVE FINISH: FINISH NO. 5.3.1.2 OF MIL-STD-171.
5. MIL-W-13055 APPLIES.



CURRENT DESIGN ACTIVITY CAGE CODE 19200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07806-5000

BI \rightarrow (A3) CODE IDENT NO. 19205
PART NO. 7791022

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES	ORIGINAL DATE OF DRAWING	9 SEP 60		PLUNGER, INDEXING	DEPT OF THE ARMY SPRINGFIELD ARMORY, SPRINGFIELD, MASS.	
	DRAFTSMAN	EGJ	CHECKER			EGW
	TRACER	EGJ	CHECKER			SD
	ENGR	REAR	ENGR			REAR
MATERIAL: STEEL, ASTM-A108 1084 THRU 1095	SUBMITTED		V. G. L. L. L. L.		7791022	
HEAT TREATMENT SEE NOTE 3	APPROVED BY ORDER OF THE CHIEF OF ORDNANCE		H. F. L. L. L.			
FINAL PROTECTIVE FINISH SEE NOTE 4	ORD CORPS		ORD CORPS			
SCALE 2/1				DWG SIZE A	SHEET 1 OF 1	
UNIT WT				RMH REF SA-A 42678		

[illegible]

ERR 29Z1306R
(ECP G053067, 3
(ECP G054496, 4

91-07-27 91-03-13
91-01-22)

B 7791021

SYM	
A	(1-B) SEE EO NO. 12958

REVISIONS

DESCRIPTION

SA27673

DATE	APPROVAL
SONG	1-1-1

95 DP STRAIGHT KNURL,
CLASS I TOL, PER
ANSI B94.6

24B	(1) SEE EO NO. 3A
24C	SEE EO RIA-1400
D	SEE EO 62000
	EO 70710

DATE	4-2-67	TIME	4:00 PM
BY	A. S. 67	BY	A. S. 67
REMARKS	5 FEB 68 3:40 PM		
INITIALS	JNC		

NOTES:

FINISH **125**

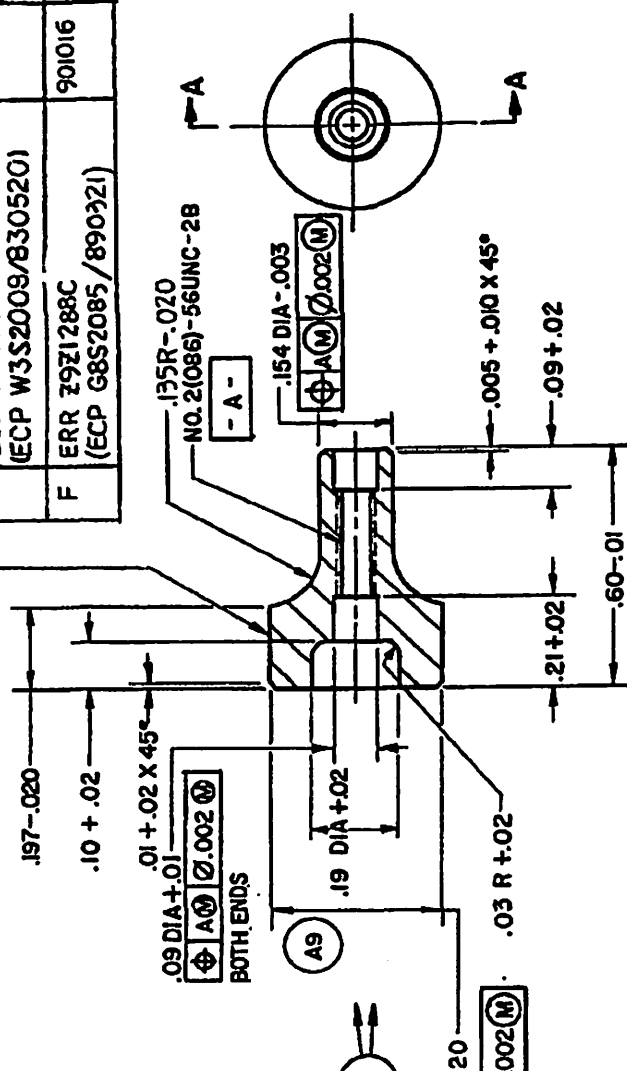
2 ALL EDGES SHALL BE BROKEN .005+.015
UNLESS OTHERWISE SPECIFIED.

3. HEAT TREATMENT: HEAT AT 1500° TO 1550°F OIL QUENCH. TEMPER TO

HARDNESS SPECIFIED. HEAT TREATMENT METHOD IS FOR GUIDANCE ONLY.

4 FINAL PROTECTIVE FINISH: FINISH NO. 53.12 OR 53.22 OF MIL-STD-171.

5.MIL-W-13855 APPLIES.



SECTION A-A

A8

NT DESERT ACTIVITY PAGE CODE 10300
U.S. ARMY
RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
FORT MONMOUTH, NEW JERSEY 07705-5000

A3

PART NO. 7791021

	MK19 MOD		PHYSICAL PROPERTIES
E3269545	3 40MM MG		
D7791038	LAUNCHER,		VP
	M 79		TS
SEE ENGRG RECORDS			ELR
			RA
			BH
	USED ON		
	APPLICATION		
DO NOT	APPLY PART NO.		AGG TO
100	100-4040000		69

UNLESS OTHERWISE SPECIFIED	SEE NOTE 3
DIMENSIONS ARE IN INCHES	FINAL PROTECTIVE FINISH
TOLERANCES ON ANGLES	SEE NOTE 4
FRACTIONS DECIMALS	
$\frac{1}{16}$	
MATERIAL STEEL, ASTM-A108	
1144, G11370, G11410	
HEAT TREATMENT	

ORIGINAL DATE OF DRAWING	9 SEP 60
DESIGNED BY	CHITMAN <i>CH</i>
CHECKED BY	TRACER <i>CH</i>
CHECKED BY	CHITMAN <i>CH</i>
DATE	10-1-60
SUBMITTED BY	<i>MA Henderson</i>
APPROVED BY ORDER OF THE CHIEF OF BUREAU	<i>H. T. Paul</i>

**SPRINGFIELD ARMORY,
SPRINGFIELD, MA.
01101**

1201622

CODE IDENT NO. 19205

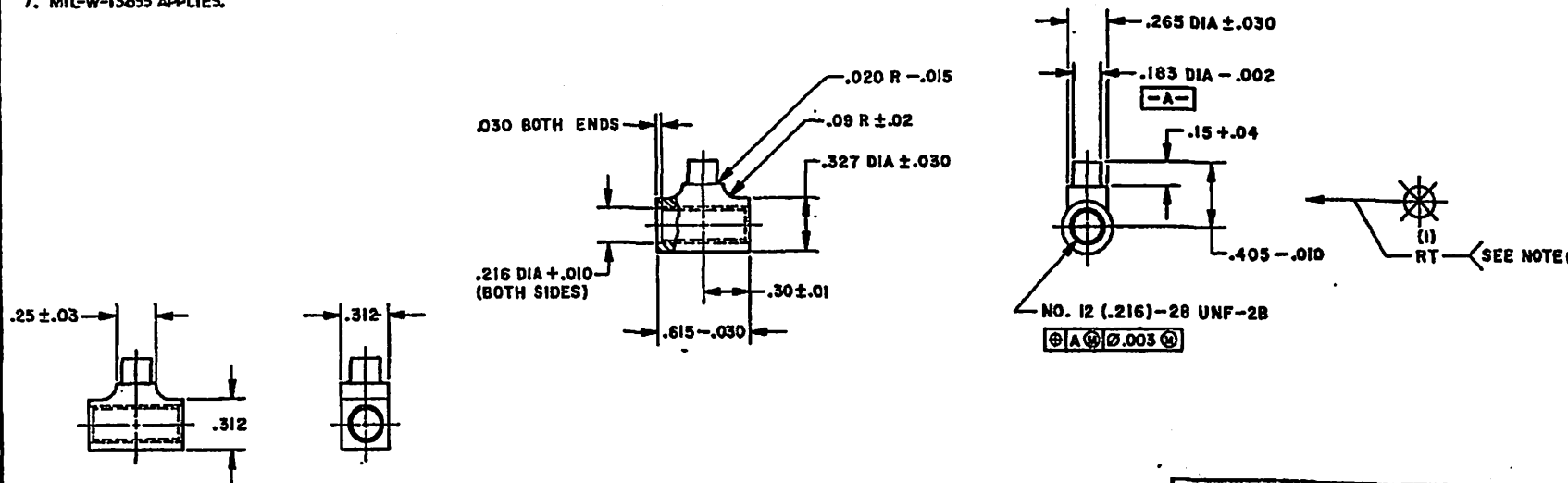
五、

RMH REF 3A-142571

NOTES:

1. FINISH 125/.
2. ALL EDGES SHALL BE BROKEN .005+.010 UNLESS OTHERWISE SPECIFIED.
3. MATERIAL:
 - A. FOR WROUGHT MATERIAL:
STEEL, COMP 1042, ASTM-A108 OR SPEC
ASTM-A108: G11370, 11410, 1042, 1144.
 - B. FOR PRECISION CASTING:
STEEL, COMP 108640 OR 108735, SPEC
MIL-S-22141.
4. HEAT TREATMENT:
HEAT AT 1525° TO 1575° F. OIL QUENCH.
TEMPER TO HARDNESS SPECIFIED. HEAT
TREATMENT METHOD IS FOR GUIDANCE ONLY.
5. FINAL PROTECTIVE FINISH:
FINISH 5.3.1.2 OR 5.3.2.2 OF MIL-STD-171.
6. CLASSIFICATION AND INSPECTION OF
INVESTMENT CASTINGS TO BE IN ACCORDANCE
WITH CLASS 3, GRADE C, SPEC MIL-STD-2175,
EXCEPT THAT SAMPLE SIZE FOR MAGNETIC
PARTICLE INSPECTION SHALL CONFORM TO TABLE I. (J)
7. MIL-W-13855 APPLIES.

NUMBER OF EXPOSURES	NUMBER OF COM- PONENTS PER FILM	FILM SIZE	TYPE OF FILM OR EQUIV	REVISIONS				
				NO	ZONE	LTR	DESCRIPTION	DATE
1	200 TO 240	14 X 17				H	REDRAWN & REVISED W/CHANGE SEE ED-82000	8 FEB 68
						J	(U) SEE ED NRD 92097	6 JUN 68
						K	NOR G853081/880812	29 OCT 68
						L	ERR 2921175AT (ECP W952019/790627) (ECP W352008/830520) (ECP G852085/890321)	89 OCT 68
						M	ERR 2921306R (ECP G053067, 90-07-27) (ECP G054496, 91-01-22)	91-03-43



ALTERNATIVE METHOD

CURRENT DESIGN ACTIVITY CASE CODE 19200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07806-3000

PART NO. 7791020

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING		DEPT OF THE ARMY SPRINGFIELD ARMOY, SPRINGFIELD, MA	
VP		TOLERANCES ON	DECIMALS	9 SEP 60	TEK	KEY, WINDAGE SCREW	
TS		ANGLES &	XXX ± .015				
EL 2	E3269545	MATERIAL					
RA		SEE NOTE 3					
GN	D7791038	HEAT TREATMENT				DWG SIZE CODE IDENT NO. C 19205 7791020	
RH	A66 TO 69	SEE NOTE 4					
APPLICATION		FINAL PROTECTIVE FINISH				SCALE 2/1 UNIT WT SHEET 1 OF 1	
		SEE NOTE 5					

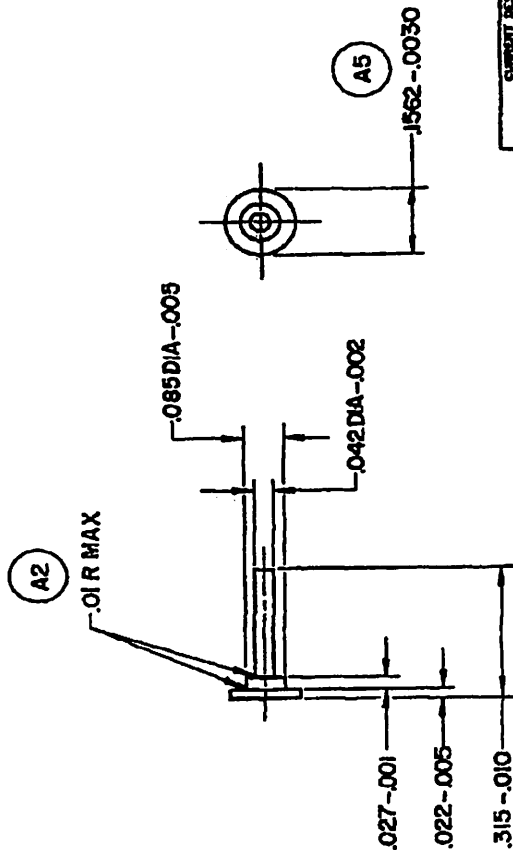
the fact that the majority of the population is still in the hands of the enemy. The majority of the population is still in the hands of the enemy. The majority of the population is still in the hands of the enemy.

B 7791019

PETITIONERS			DATE	JANUARY
1	SEE EO NO. SAZ27673	DO NOTED	22 JUL 68	24
2	SEE EO NO. SA29433	DO NOTED	5 FEB 68	24
3	SEE EO B2000	DO NOTED	5 FEB 68	24
4	ERR Z9Z1175 AK	DO NOTED	5 FEB 68	24
5	(ECP WGS2019/790629)	DO NOTED	5 FEB 68	24

NOTES:

1. FINISH ¹²⁵ ✓
2. ALL EDGES SHALL BE BROKEN .005 MAX.
3. FINAL PROTECTIVE FINISH: FINISH NO. 5.3.1.2 OF MIL-STD-171.
4. MIL-W-3855 APPLIES. (AI)



CURRENT DESIGN ACTIVITY CASE CODE 18200
U.S. ARMY
ARMAMENT RESEARCH DEVELOPMENT AND ENGINEERING CENTER
ATTN: TYPING INSTRUCTIONS
DATE: 10-17-68

CODE IDENT NO. 19205
PART NO. 7791019
C

SPRINGFIELD ARMORY
SPRINGFIELD, MA 01101

27910194

1 of 1

RMH REF 8A-A42679

[illegible]



NOTES:

1. FRESH ¹⁰ EXCEPT AS NOTED
2. ALL COOKS SHALL BE WORKED JOH+JOG
3. UNLESS OTHERWISE SPECIFIED
4. HANDSALLS AND LINE ORCAUTIONS TO BE OBSERVED JOH+JOG AND JOE
5. HEAT TREATMENT HEAT AT 300°F TO MOVE
6. HEAT TREATMENT HEAT AT 300°F TO MOVE
7. HEAT TREATMENT HEAT AT 300°F TO MOVE
8. TOLERANCE BETWEEN WARE ORCAUTIONS SHALL NOT BE ACCUMULATIVE.

1 2 3 4

NOTES:

1. SCALE SHALL SLIDE FREELY AFTER RIVETING AND PEENING OF SCREW.
2. PIN SHALL PROTRUDE WITHIN THE 180° RANGE, AS SHOWN, WHEN SCREW IS TIGHTENED.
3. PIN SHALL BE FLUSH OR BELOW SIDE OF WHEEL.
4. AFTER RIVETS 7791019 HAVE BEEN HEADED OVER AND FINISHED FLUSH WITH FRAME 7791016, BRIGHT AREAS SHALL BE TOUCHED UP IN ACCORDANCE WITH NOTE 5. TOUCH UP TO BE APPLIED IMMEDIATELY PRIOR TO PRESERVATION AND PACKAGING.
5. MIL-W-38555 APPLIES.

PIN-MS16362-98
SEE NOTE 3

WHEEL-7791029

180°
45°

375

300

200

100

SCREW-7791018

PLUNGER-7791022

WASHER-MS3538-60

SPRING-7791028

WASHER-1101390

SCREW-7791025

SCALE-7791017

EDGE OF SCALE SHALL BE FLUSH TO .020 BELOW EDGE OF FRAME AND SHALL BE PARALLEL TO IT WITHIN .010

PEEN THREAD TO PREVENT LOSS OF SCREW.
SEE NOTE 1

2 RIVET-7791019
HEAD OVER AND
FINISH FLUSH.
SEE NOTE 1

FRAME-7791016

THICKNESS AT RIVETS AND ADDRESS SCALE AND FRAME SHALL NOT EXCEED .220 MAX.

CURRENT DESIGN ACTIVITY CASE CODE FROM
ANALYST: RIVETING, PEENING, AND TIGHTENING CENTER
PRELIMINARY DESIGN, NEW JERSEY 100-0000

CODE IDENT NO. 19205
PART NO. 7791015

FOR LIST OF PARTS, SEE ENGINEERING PARTS LIST NO. 7791015.

ORIGINAL DATE 9 SEP 60		DESIGNATION OF DRAWING	
DATE	BY	DATE	BY
10/1/60	10/1/60	10/1/60	10/1/60
TOLERANCES UNLESS OTHERWISE SPECIFIED		TOLERANCES UNLESS OTHERWISE SPECIFIED	
FRACTIONS 1/16" FRACTIONS		FRACTIONS 1/16" FRACTIONS	
DECIMALS .0001		DECIMALS .0001	
SEE ENGINEERING RECORDS		SEE ENGINEERING RECORDS	
DATE		DATE	
10/1/60		10/1/60	
APPROVED		APPROVED	
10/1/60		10/1/60	
APPLY PART NO.		APPLY PART NO.	
7791015		7791015	

FRAME
ASSEMBLY

SPRINGFIELD ARMOY
SPRINGFIELD, MA 01101

7791015

1 RHH

NOTED 181 / EXCERPT AS NOTED

2. ALL EGGS SHALL BE BROKE 000 + 005
UNLESS OTHERWISE SPECIFIED.

3. MATERIALS

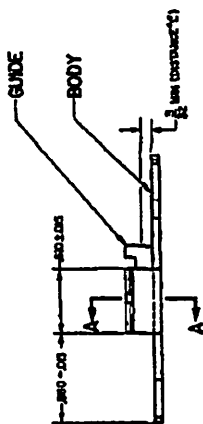
DOOR-FEEL, FEEL REC, 157M-4629, 1664
QUADROD, FEEL REC 157M-4504, 1502, 403
4190, 0640, 0740.
BRUZZ ALLOTTI: 401-87 OR
405 401-92, CLASS 00-1

4. THE CHART BETWEEN ROAD AND BODY SHALL
CONTAIN A DOUBLE LONGITUDINAL LOAD
GRADUALLY APPLIED

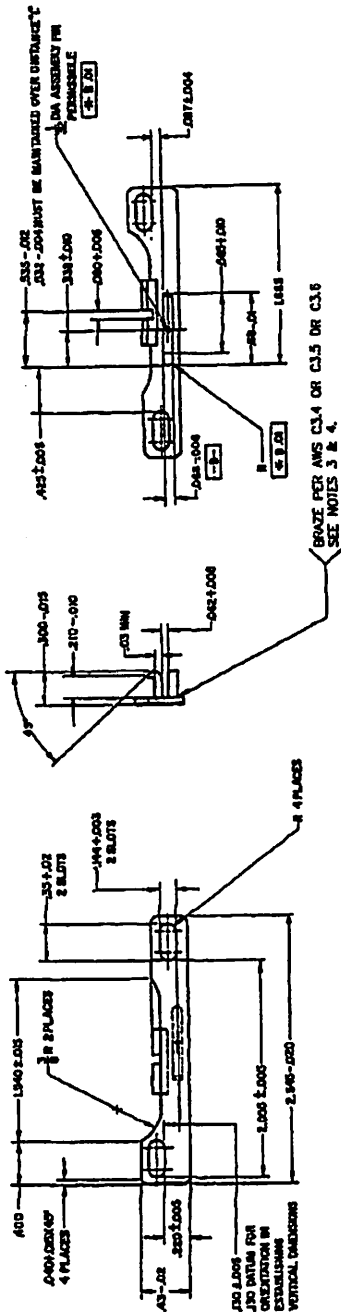
SILENT TREATMENT HEAT AT 1030°+ 1070°+ 1
ON OVERHEAT, TEMPER TO HARDNESS SPECIFIED.
HEAT TREATMENT METHOD IS FOR BONDAGE
ONLY.

5. MATERIALS SHALL BE LAMINATED AS SHOWN. A
LENGTH APPROXIMATELY EQUIVALENT TO THE
THICKNESS OF THE MATERIAL TO PREVENT
TEARING DURING THE BURNING OPERATIONAL

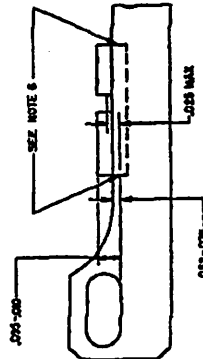
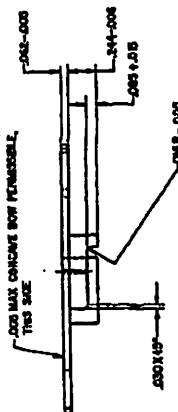
2 JUL 64 - 000050 APPLIES



SECTION A-A



**— DOB MAX CONCERN HOW FIRMABLE,
THIS SIDE**



**WE TALK
ALL DAY**

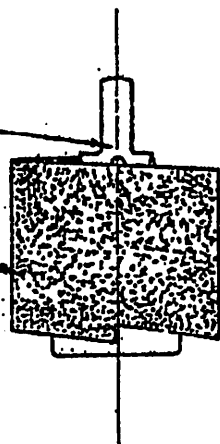
[illegible]

NOTES: 1. ASSEMBLE CORE IN POSITION SHOWN
CORE SHALL NOT DISASSEMBLE WITH
A 5LB AXIAL LOAD APPLIED ON THE
SMALL END. THE END COIL DIA OF BRUSH
CHANNEL MAY BE REDUCED TO MEET
THIS REQUIREMENT.
2. MIL-W-13835 APPLIES.
3. MIL-B-20100 APPLIES.

9990665

REVISIONS			
REV	DESCRIPTION	DATE	BY
A	REDESIGN AND REVISED SEE EQ NO. 9A2334G	24 MAR 64	10/1
B		20 OCT 64	10/1
C	(3) SEE ENG HQR 20684	3 MAR 73	10/1

BRUSH - 7790617
CORE - 7791155



DUPLICATE
COPY ON FILE IN TECHNICAL
DATA DIVISION

DISTRIBUTION STATEMENT A:
"APPROVED FOR PUBLIC RELEASE;
DISTRIBUTION IS UNLIMITED."

(C)

CODE IDENT NO. 19204
PART NO. 7790665

SEE PL-7790665

B8449881		BRUSH ASSY	40 MM	WITH THONG	USED ON	APPLICATION	APPLY PART NO.	40-666665
DATE		10/1	10/1	10/1	10/1	10/1	10/1	10/1
UNIT		10/1	10/1	10/1	10/1	10/1	10/1	10/1
SCALE		10/1	10/1	10/1	10/1	10/1	10/1	10/1
DEPT OF THE ARMY		U.S. ARMY WEAPONS COMMAND		ROCK ISLAND, ILL. 61201		7790665		10/1

NOTES:

1. FINISH 125/ UNLESS OTHERWISE SPECIFIED. (F1)

2. BREAK EDGES .005 ± .015 UNLESS OTHERWISE SPECIFIED. (D1)

3. MATERIAL:

A. STEEL, CARBON; SPEC QQ-S-634 OR QQ-S-637, AS APPLICABLE; 1137, 1141, 1040

B. STEEL, ALLOY SPEC ASTM A304 A322 A334 A336

4. HEAT TREATMENT FOR MATERIALS A & B:

MATERIAL A - HEAT AT 1500°F TO 1550°F AND MATERIAL B -

HEAT AT 1550°F TO 1600°F; OIL

QUENCH. TEMPER 30 MIN AT HEAT

TO ROCKWELL C35 TO 40.

HEAT TREATMENT METHOD IS FOR

GUIDANCE EXCEPT THAT TIME AT

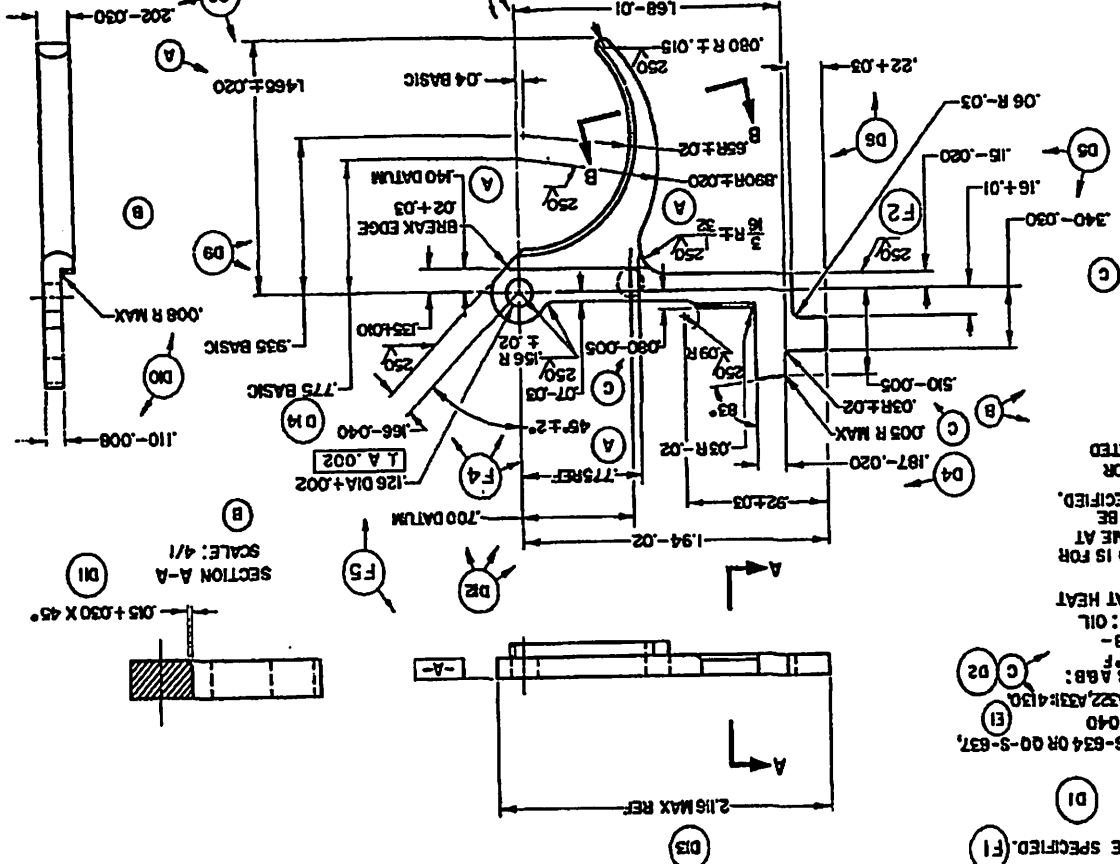
TEMPERATURE SHALL NOT BE

REDUCED BELOW THAT SPECIFIED.

5. DATUMS .700 AND .140 APPLY FOR

ESTABLISHING DIMENSIONS LOCATED

FROM PIN HOLE.



GENERAL NOTES:
1. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.

SECTION B-B

CODE IDENT NO. 19205

PART NO. 7790662

TRIGGER

SPRINGFIELD ARMOY

7790662

SCALE 2/1 UNIT WT

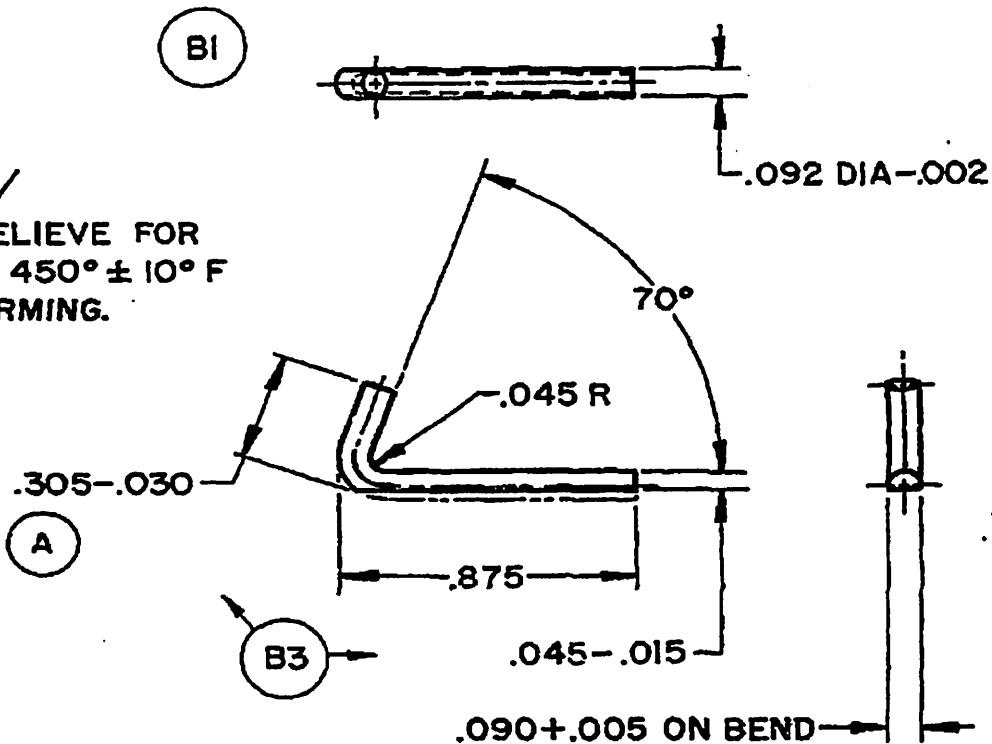
NET DWG SA-24023

NOTICE—When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever, and the fact that the Government may have furnished, furnished, or in any way supplied this said drawing, specification, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

PHYSICAL PROPERTIES		DO NOT DO	APPLY PART NO. AS SPECIFIED	REVISIONS			
YP		APPLICATION		SYM	DESCRIPTION	DATE	APPROVAL
TS		NEXT ASSY	USED ON	A2	SEE EO NO. SA25915	23 NOV 60	RE Aho
EL2		SEE ENGRG RECORDS		B	(1-3) SEE EO NO. SA 27673	30 NOV 64	Input
RA		F7790600 LAUNCHER,		CAC	(1-2) SEE EO 82000	5 FEB 68	B. Hebrake
BH		M79		D	ERR 29Z1175AK (ECP W9S2019/790629)	8 90913	515
RH							

NOTES:

1. FINISH 125/
2. STRESS RELIEVE FOR 30 MIN AT $450^{\circ} \pm 10^{\circ} \text{ F}$ AFTER FORMING.



CURRENT DESIGN ACTIVITY CAGE CODE 19200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07806-5000

B2 CODE IDENT NO. 19205
PART NO. 7790660

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES $\pm .010 \pm 1^{\circ}$	ORIGINAL DATE OF DRAWING 18 JAN 60	<div style="text-align: center;"> <h1>SPRING, SAFETY</h1> </div>		<div style="text-align: center;"> <h2>SPRINGFIELD ARMORY, SPRINGFIELD, MA. 01101</h2> </div>	
	DRAFTSMAN <i>R.E.A.</i> CHECKER <i>GDD</i>				
	TRACER <i>R.E.A.</i> CHECKER <i>R.F.D.</i>				
	ENGR <i>R.E.A.</i> ENGR <i>EGW</i>				
MATERIAL MUSIC WIRE, STEEL, SPEC QQ-W-470	SUBMITTED <i>D.W. Shunt</i> ORD CORPS	SCALE 2/1		DWG SACS 7790660	
HEAT TREATMENT SEE NOTE 2	APPROVED BY ORDER OF THE CHIEF OF ORDNANCE <i>J. Massa</i> ORD CORPS	UNIT WT		SHEET 1 OF 1	
FINAL PROTECTIVE FINISH LUBRICATING OIL SPEC VV-L-800					

REF DWG SA-A34615

PDC

NOTES:

1. WIRE, MUSIC, SPEC QQ-W-470.
2. HEAT TREATMENT:
STRESS RELIEVE AT 450° F ± 10°
FOR 30 MIN, AFTER FORMING.
3. FINAL PROTECTIVE FINISH:
LUBRICATING OIL, SPEC VV-L-800.
4. TO WORK OVER ----- .130 IN. (MAX) DIA ROD.

OUTSIDE DIA SOLID, NOT MORE THAN _____ .274
 INSIDE DIA FREE, NOT LESS THAN _____ .168
 ASSEMBLED HEIGHT BASIC _____ 1.070
 LOAD AT ASSEMBLED HEIGHT _____ 2.5 ± .3 LB
 SOLID HEIGHT, NOT MORE THAN _____ .690
 DIA OF WIRE (APPROX) _____ .045
 FREE HEIGHT (APPROX) _____ 1.13
 NUMBER OF COILS (APPROX) _____ 15
 DIRECTION OF COILING _____ OPTIONAL
 ENDS CLOSED AND GROUND FLAT
 OPERATING HEIGHT BASIC _____ .810
 LOAD AT OPERATING HEIGHT _____ 14.0 ± 1.3 LB
 SPRING RATE (REF) _____ 44 LB/IN
 MANUFACTURE IN ACCORDANCE WITH MIL-S-13572, TYPE I, GRADE B.

CURRENT DESIGN ACTIVITY EAGE CODE 15200
 U.S. ARMY
 ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
 FORT MONMOUTH ARSENAL, NEW JERSEY 07060-5000

(USED WITH ACTUATOR-7790601)

PART NO. 7790658

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING 20 JAN 60		SPRINGFIELD ARMOY, SPRINGFIELD, MA 01101	
YP		TOLERANCES ON DECIMALS XX ±		DRAFTSMAN LAS	CHECKER EGW	SPRING, HELICAL	
TS		ANGLES ± XXX A		TRACER R. J. Williams	CHECKER H. R. R. R.		
EL 2		MATERIAL		ENGINEER KK	ENGINEER REA		
RA	F7790600	SEE NOTE 1		SUBMITTED Philip C. Hebrule		DWG SIZE B	CODE IDENT NO. 19205
BH		HEAT TREATMENT SEE NOTE 2		APPROVED R. J. Williams		7790658	
RH		FINAL PROTECTIVE FINISH SEE NOTE 3				SCALE	UNIT WT
APPLICATION						SHEET 1 OF 1	

B-7790658

B-

A

NOTES:

1. MATERIAL:
WIRE, MUSIC, SPEC QQ-W-470.
2. FINAL PROTECTIVE FINISH:
LUBRICATING OIL, SPEC VV-L-800.
3. HEAT TREATMENT:
STRESS RELIEVE AT 450° F ± 10°
FOR 30 MIN, AFTER FORMING.
4. TO WORK IN ----.26 IN. (MIN) DIA BORE.
5. TO WORK OVER ----.17 IN. (MAX) DIA ROD.

OUTSIDE DIA SOLID, NOT MORE THAN _____ .248
 INSIDE DIA FREE, NOT LESS THAN _____ .198
 ASSEMBLED HEIGHT BASIC _____ .24
 LOAD AT ASSEMBLED HEIGHT _____ .80 ± .08 LBS
 SOLID HEIGHT, NOT MORE THAN _____ .17
 DIA OF WIRE (APPROX) _____ .024
 FREE HEIGHT (APPROX) _____ .325
 NUMBER OF COILS (APPROX) _____ 7
 DIRECTION OF COILING _____ OPTIONAL
 ENDS CLOSED AND GROUND FLAT
 OPERATING HEIGHT BASIC _____ .18
 LOAD AT OPERATING HEIGHT _____ 1.36 ± .14 LBS
 SPRING RATE (REF) _____ 9.4 LB/IN
 MANUFACTURE IN ACCORDANCE WITH MIL-S-13572, TYPE I, GRADE B.

REVISIONS				
MF	ZONE	LTR	DESCRIPTION	DATE
		B	REDRAWN & REVISED W/CHANGE SEE E0 82000	5 FEB 68
		C	ERR Z9Z1175AK (ECP W9S2019/790629)	890913

CURRENT DESIGN ACTIVITY CASE CODE 0000
 U.S. ARMY
 ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
 PICATUNNY ARSENAL, NEW JERSEY 07806-3000

(USED WITH FIRING PIN-7790628)

PART NO. 7790656

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING 18 DEC 59		SPRINGFIELD ARMORY, SPRINGFIELD, MA 01101	
VP		TOLERANCES ON DECIMALS .XX ±		DRAFTSMAN LAS	CHECKER SGP	SPRING, HELICAL	
TS		ANGLES ± .XXX ±		TRACER R. E. Nelson	CHECKER W. R. Nelson		
EL 2		MATERIAL	SEE NOTE 1	ENGINEER REA	SPRINGMASTER NWG		
RA	F7790600	LAUNCHER, M79	HEAT TREATMENT SEE NOTE 3	SUBMITTED Philip E. Hebrule		DWG SIZE B	CODE IDENT NO. 19205
BH		NEXT ASSY.	FINAL PROTECTIVE FINISH SEE NOTE 2	APPROVED R. S. Stanley		7790656	
RH		USED ON APPLICATION				SCALE	SHEET 1 OF 1

NOTES:

1. MATERIAL:
WIRE, MUSIC, SPEC QQ-W-470.
2. HEAT TREATMENT:
STRESS RELIEVE AT 450° F ±10°
FOR 30 MIN, AFTER FORMING.
3. FINAL PROTECTIVE FINISH:
LUBRICATING OIL, SPEC VV-L-800.
4. TO WORK IN ----- .250 IN. (MIN) DIA BORE.

REVISIONS				
MF	ZONE	LTR	DESCRIPTION	DATE
		B	REDRAWN & REVISED W/CHANGE SEE ED 82000	5 FEB 68
		C	ERR 7921175AK IECP W952019/7906291	890913
				PLU1 CWT

OUTSIDE DIA SOLID, NOT MORE THAN _____ .248
 INSIDE DIA FREE, NOT LESS THAN _____ .163
 ASSEMBLED HEIGHT BASIC _____ 1.3
 LOAD AT ASSEMBLED HEIGHT _____ 3.6 ± .4 LBS
 SOLID HEIGHT, NOT MORE THAN _____ .800
 DIA OF WIRE (APPROX) _____ .035
 FREE HEIGHT (APPROX) _____ 1.590
 NUMBER OF COILS (APPROX) _____ 22
 DIRECTION OF COILING _____ OPTIONAL
 ENDS CLOSED AND GROUND FLAT
 OPERATING HEIGHT BASIC _____ .910
 LOAD AT OPERATING HEIGHT _____ 8.5 ± .9 LBS
 SPRING RATE (REF) _____ 12.5 LB/IN
 MANUFACTURE IN ACCORDANCE WITH MIL-S-13572, TYPE I, GRADE B.

CURRENT DESIGN ACTIVITY CASE CODE 19200
 U.S. ARMY
 ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
 FORT MONMOUTH, NEW JERSEY 07066-3000

(USED WITH EXTRACTOR-7791529)

PART NO. 7790655

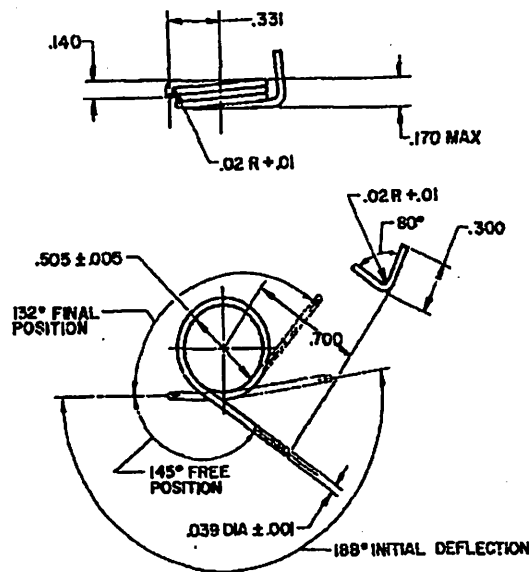
MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING 28 JAN 60	SPRINGFIELD ARMORY, SPRINGFIELD, MA 01101		
YP		TOLERANCES ON DECIMALS XX ±		DRAFTSMAN LAS	CHECKER EGW	SPRING, HELICAL	
TS		ANGLES ± XXX ±		TAMER R. J. Helms	CHECKER R. J. Helms		
EL 2		MATERIAL	SEE NOTE 1	LOGIST KK	ENGINEER REA		
RA	F7790600	LAUNCHER, M79	HEAT TREATMENT SEE NOTE 2	SUBMITTED R. J. Helms			
BH		NEXT ASSY.	USED ON	APPROVED R. J. Helms		DWG SIZE B	
RH		APPLICATION		FINAL PROTECTIVE FINISH SEE NOTE 3		CODE IDENT NO. 19205	
						7790655	
						SCALE	UNIT WT
						SHEET	OF 1

NOTES: - THIS DRAWING IS A PRELIMINARY DESIGN, SPECIFICATIONS OF WHICH ARE SUBJECT TO CHANGE WITHOUT NOTICE. THE DRAWING IS NOT TO BE USED FOR CONSTRUCTION OF A FINAL DESIGN. THE DRAWING IS NOT TO BE USED FOR CONSTRUCTION OF A FINAL DESIGN. THE DRAWING IS NOT TO BE USED FOR CONSTRUCTION OF A FINAL DESIGN.

(USED WITH LEVER - 7790623)

NOTES:

1. DWG 8726102 APPLIES.



NO. OF COILS 2.9 REF
MAX DEFLECTION WITHOUT SET BEYOND FINAL POSITION 50° REF
DIRECTION OF HELIX RH
TORQUE AT INITIAL POSITION49 LB IN ± .05 LB IN.
TORQUE AT FINAL POSITION94 LB IN ± .09 LB IN.
SPRING RATE011 LB IN. PER DEGREE
SPRING FUNCTIONS OVER ROD431 DIA MAX

C 7790654

FOR NEW DESIGN WORK AND
PROCUREMENT USE PART NO. 7791558

ORD PART NO. 7790654

PHYSICAL PROPERTIES		TOLERANCES ON DIMENSIONS ± .010		ORIGINAL DATE OF DRAWING 4 DEC 69	
SP	LAUNCHER, XM 75	MATERIAL MUSIC WIRE, STEEL, SPEC QQ-W-470		APPROVED BY J. F. [Signature]	
TR	SEE ENGINEERING RECORDS	HEAT TREATMENT STRESS RELIEVE FOR 30 MIN AT 450° TO 475° F AFTER FINISH		APPROVED BY [Signature]	
DA	DO NOT APPLY PART NO.	FINAL PROTECTIVE FINISH		APPROVED BY [Signature]	
IN					
AP					
SA					
MA					
PA					
TA					
CA					
FA					
GA					
HA					
IA					
JA					
KA					
LA					
MA					
NA					
OA					
PA					
QA					
RA					
SA					
TA					
UA					
VA					
WA					
XA					
YA					
ZA					

SPRING, HELICAL
TORSION

SPRINGFIELD ARMORY
ORDNANCE CORPS
DEPT OF THE ARMY
SPRINGFIELD 1, MASS.

7790654

SCALE 2/1 UNIT WT
REF DWG 8A-834623

C 7790654

B

A

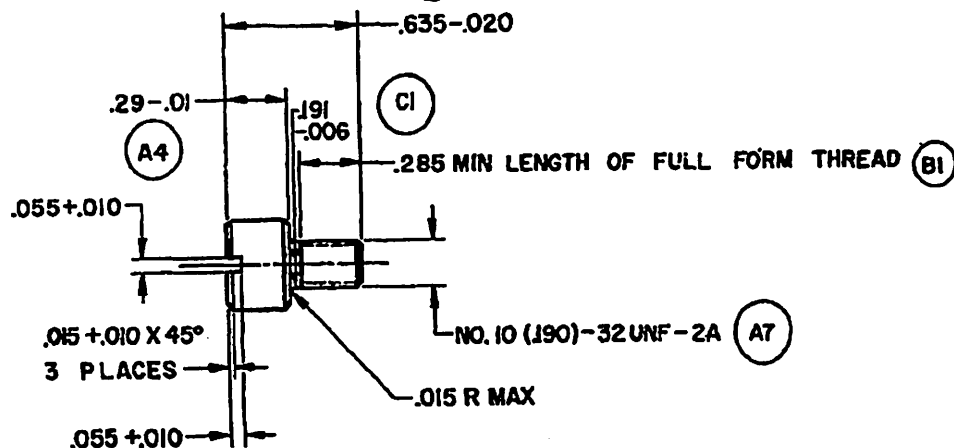
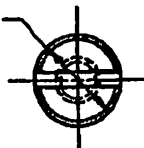
POC

NOTICE: When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement transaction, the United States Government hereby denies any responsibility for any damages whatsoever and the fact that the Government may have furnished, furnished, or may have supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner assuming the liability for any other person or corporation, or covering any design or production in manufacture, use, or all any patent infringement that may in any way be related thereto.

NOTES:

1. FINISH 125/ (A1)
2. CARBURIZE 1575° TO 1600°F TO CASE DEPTH .008-.012, QUENCH IN OIL, TEMPER 45 MIN AT 350°-375°F. HEAT TREATMENT METHOD IS FOR GUIDANCE ONLY EXCEPT TEMPERING TIME SHALL NOT BE REDUCED BELOW THAT SPECIFIED.
3. MIL-W-13855 APPLIES.

.373-.002 (D)



CURRENT DESIGN ACTIVITY CASE CODE 19200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07806-3000

CODE IDENT NO. 19205

PART NO. 7790647 (B2)

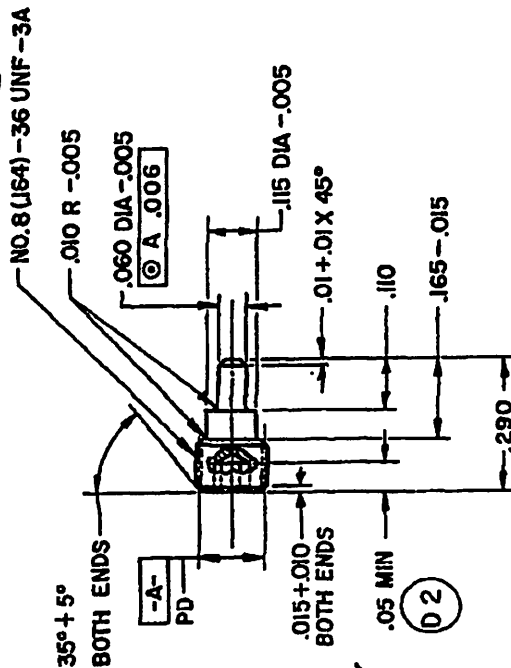
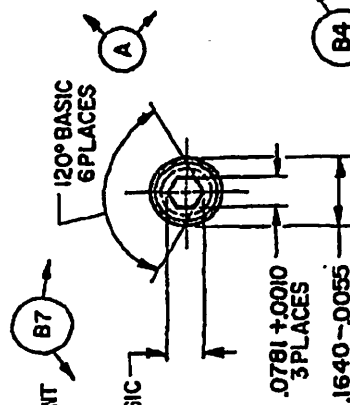
		PHYSICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING		160CT59		SCREW, SIGHT BASE		SPRINGFIELD ARMORY, SPRINGFIELD, MA 01101	
				DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLE ±P		DRAWN BY JMB CHECKED GDD		TRACED BY RKS CHECKED ESW					
LAUNCHER		YP				OVER BY REMO		LHCH					
F7790600 M 79		TS				SUBMITTED		V.U. Grant					
SEE ENGRG RECORDS		EL2		MATERIAL STEEL ALLOY ASTM-A304, A322, A331: B620		APPROVED BY ORDER OF THE CHIEF OF OFFICE		J.F. Lynch					
APPLICATION		RA		HEAT TREATMENT SEE NOTE 2		SCALE 2/1		UNIT WT					
DO NOT		RM	15 N	FINAL PROTECTIVE FINISH FINISH NO. 55.120R33.2.2 OF MIL-STD-171		SHEET 1 OF 1							
APPLY PART NO.													

[illegible]

(USED WITH LOCK - 7790624)

NOTES:

1. FINISH 125/.
2. BREAK EXTERIOR EDGES .005+/-0.00 UNLESS OTHERWISE SPECIFIED.
3. HEAT TO 1525°-1575°F. OIL QUENCH, TEMPER 20 MIN AT HEAT TO HARDNESS SPECIFIED. HEAT TREAT METHOD IS FOR GUIDANCE ONLY EXCEPT TEMPERING TIME SHALL NOT BE REDUCED .0902 MIN. 3 PLACES BELOW THAT SPECIFIED.



U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07804-5000

B5 CODE IDENT NO. 19205
PART NO. 7790646

**SCREW, SET,
SOCKET**

7790646



SCALE	4/1	UNIT WT
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REF DWG SA-A34612

78

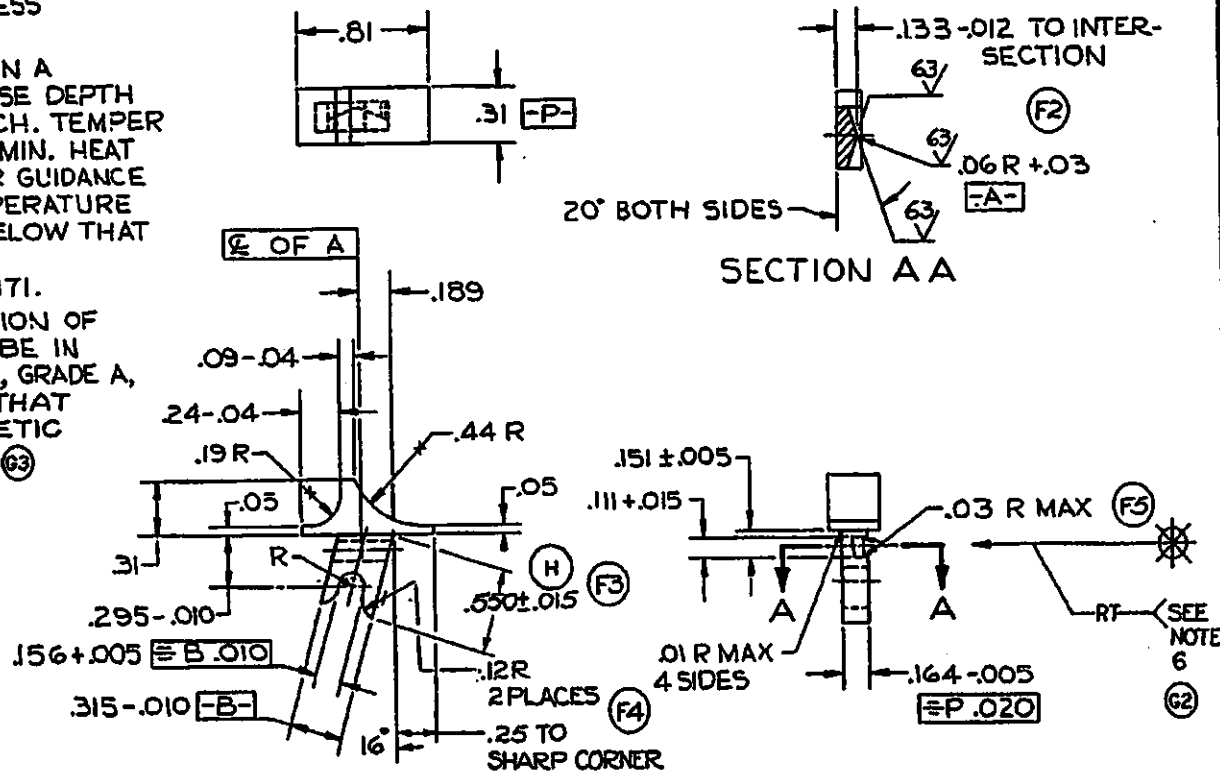
[illegible]

NOTE:

- 1A. STEEL, CARBON, SPEC QQ-S-634 OR SPEC QQ-S-637, AS APPLICABLE: 1117, 1118, 1020, 1018.
- B. CASTING TO MEET THE REQUIREMENTS OF COMP 1C8620, SPEC MIL-S-22141.
2. FINISH 125 EXCEPT AS NOTED. (F1)
3. BREAK EDGES .005+.015 UNLESS OTHERWISE SPECIFIED.
4. HEAT AT 1575° TO 1600°F IN A CARBURIZING MEDIUM TO CASE DEPTH OF .003 TO .010 OIL QUENCH. TEMPER AT 350° TO 375°F FOR 30MIN. HEAT TREATMENT METHOD IS FOR GUIDANCE EXCEPT THAT TIME AT TEMPERATURE SHALL NOT BE REDUCED BELOW THAT SPECIFIED.
5. FINISH 5.3.1.2 OF MIL-STD-171.
6. CLASSIFICATION AND INSPECTION OF INVESTMENT CASTINGS TO BE IN ACCORDANCE WITH CLASS IB, GRADE A, SPEC MIL-C-6021, EXCEPT THAT SAMPLE SIZE FOR MAGNETIC PARTICLE INSPECTION SHALL CONFORM TO TABLE I. (J)

NUMBER OF EXPOSURES	NUMBER OF COMPONENTS PER FILM	FILM SIZE	TYPE OF FILM
1	150 TO 250	14 X 17	TYPE M KODAK OR EQUIVALENT

REVISIONS			
REV	SYM	DESCRIPTION	DATE
D			7-22-66
E		SEE EO NO. RIA-13723	11-7-66
F	(1-5)	SEE EO RIA-13919	1-18-67
G	(1-3)	SEE EO-82000	5 FEB 68
H	(1)	SEE EO HRD-82296	25 OCT 68
J	(1)	SEE EO HRD 92097	8 JAN 69
K		ERR 2921175AK (ECP W9S2019/790629)	30 OCT 68



CURRENT DESIGN ACTIVITY CASE CODE 19200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PHILADELPHIA, NEW JERSEY 07906-2000

PART NO. 7790644

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING JAN 28, 1960		SPRINGFIELD ARMOY, SPRINGFIELD, MA. 01101	
TP		LAUNCHER	TOLERANCES ON .XX ± .02	DESIGNED BY	REK	SAFETY	
TS		MT9	ANGLES ± 1° .XX ± .010	CHECKED BY	RES		
EL				APPROVED BY	V.A. LUUKKONEN	SIZE	7790644
RA					H.F. LYNCH	SCALE	2/1
EN							
RM	ISN 90-91						

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B7790643

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	SEE ED NO. SA 24313	21 AUG 64	<i>[Signature]</i>
B	(1-5) SEE ED NO. SA 27673	30 NOV 64	<i>[Signature]</i>
C	SEE E0-82000	15 FEB 68	<i>[Signature]</i>
D	ERR Z9Z 1175AK KECF W9S2019/790629	890913	<i>[Signature]</i>

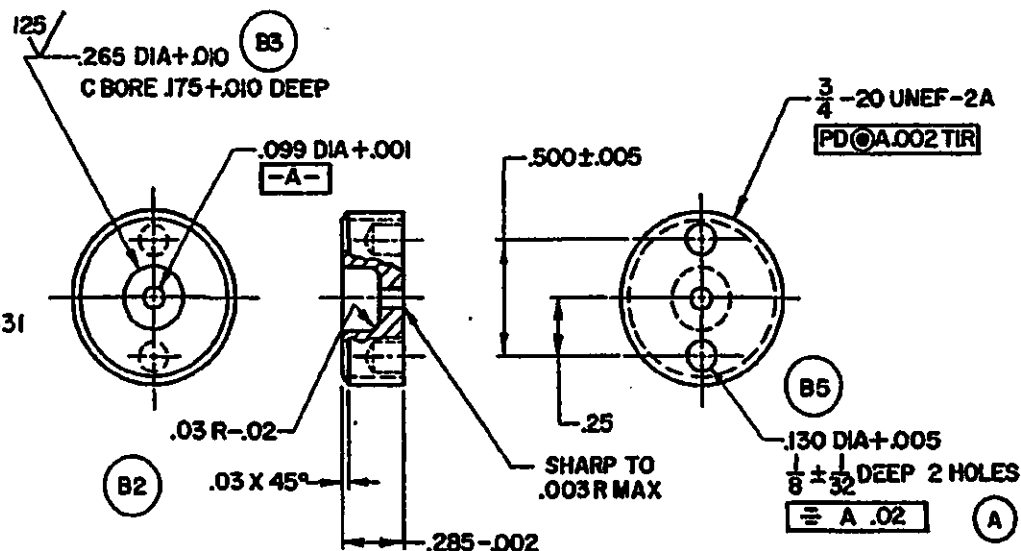
NOTES:

1. FINISH 63/EXCEPT AS NOTED.
2. BREAK EDGES .003+.010
UNLESS OTHERWISE SPECIFIED.
3. HEAT TREATMENT:
HEAT AT 1525° TO 1550°F. OIL
QUENCH. TEMPER 30 MIN AT
HEAT TO HARDNESS SPECIFIED.
HEAT TREATMENT METHOD IS
FOR GUIDANCE EXCEPT THAT
TIME AT TEMPERATURE SHALL
NOT BE REDUCED BELOW THAT
SPECIFIED.

4. MATERIAL.

STEEL, ALLOY; ASTM A304/A322, A331
8640, 8645, 8742

5. MIL-W-13855 APPLIES.



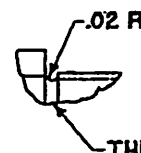
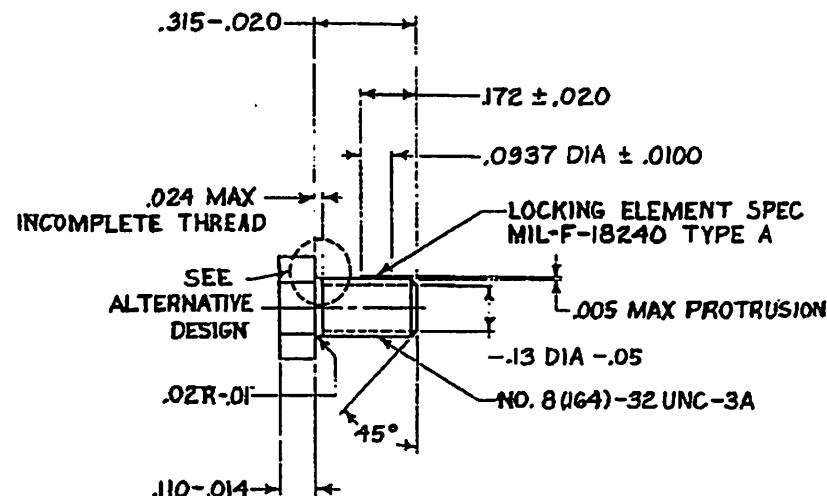
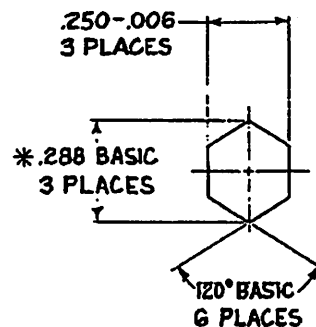
CODE IDENT NO. 19205
PART NO. 7790643

LAUNCHER, F7790600, M79 SEE ENGRG RECORDS		PHYSICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING 18 DEC 59		SPRINGFIELD ARMORY	
NEXT ASSY		TP		DIMENSIONS ARE IN INCHES		DRAFTSMAN JVB		SPRINGFIELD, MA.	
USED ON		T1		TOLERANCES ON		CHECKER RSW		01101	
APPLICATION		R12		FRACTIONS DECIMALS ANGLES		TRADER LBS		DRAWING NO. 7790643	
DO NOT		R1A		±.01 ±1°		ENGR R.E.A.		SUBMITTER	
APPLY PART NO.		R1B		MATERIAL SEE NOTE 4		SUBMITTER		7790643	
NO SPECIFIED		R1C		HEAT TREATMENT		APPROVED BY		B	
		R1D		SEE NOTE 3		DATE OF THE		SHEET 1 OF 1	
				C43 TO		DRAWING		REF DWG SA-841022	
				48		OF MR. STD-171		PDC	

NOTE:

1. STEEL, 1137 OR 1141
SPEC QQ-S-637.
2. FINISH ALL OVER $\sqrt{125}$.
3. BREAK EDGES .005 \pm .010.
4. FINISH 1.1.2.3 OF MIL-STD-171.
5. *DIM. APPLY TO INTERSECTION
OF STRAIGHT LINES.
6. USED WITH SPRING-7790641.

REVISIONS					
REV	ZONE	LTR	DESCRIPTION	DATE	APPROVED
12		C	REPLACES REV B W/CHG		
			SEE EO RIA-13994	2-17-67	<i>gja</i>
37		D	SEE EO 82000	15 FEB 68	<i>gja</i>
		E	ERR 3921175AK ECP W9S2019/7906291	8909F3	<i>gja</i>



THREAD RELIEF TO $\sqrt{125}$
DIA -.020 X .04 \pm .02 WIDE.

ALTERNATIVE DESIGN

CONVENT DESIGN ACTIVITY CODE 1000
U.S. ARMY
ARMAMENT RESEARCH DEVELOPMENT AND ENGINEERING CENTER
PICATUNNY ARSENAL, NEW JERSEY 07705-5000

PART NO. 7790642

SPRINGFIELD ARMOY
SPRINGFIELD MA 01101

SCREW, SELF-LOCKING

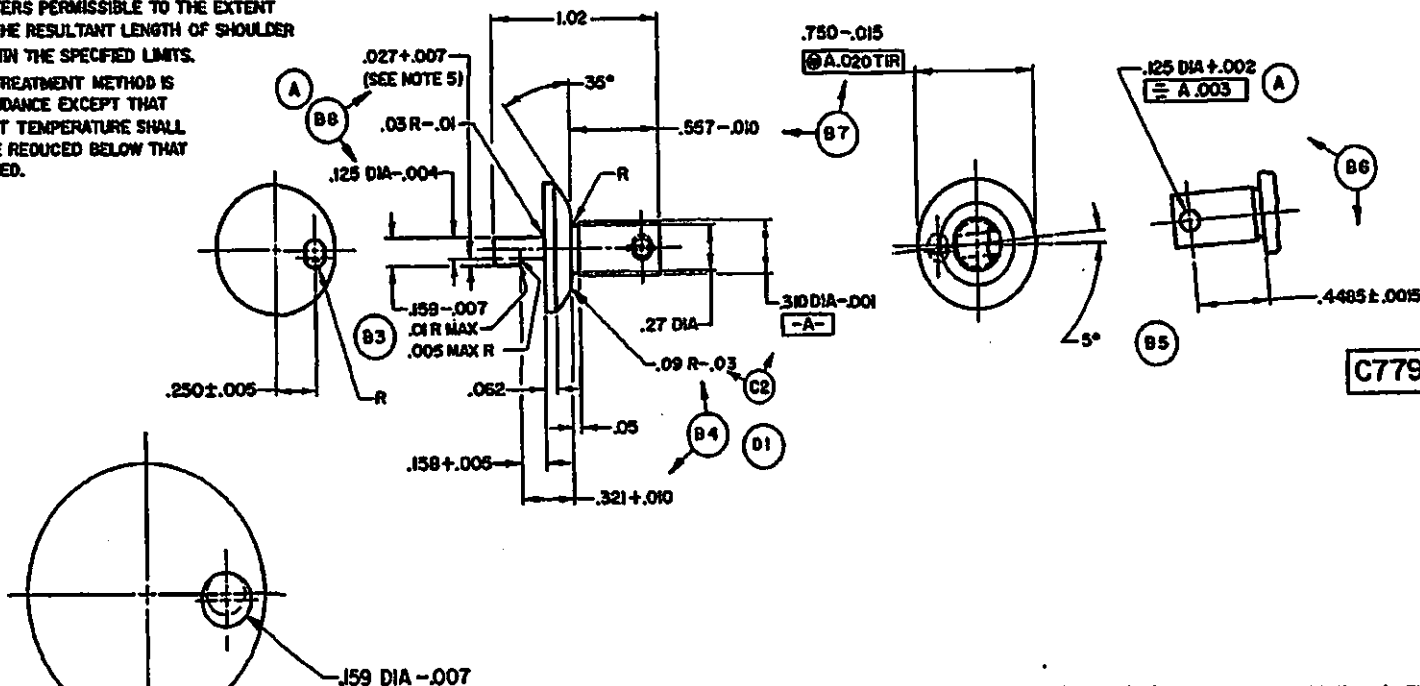
MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING		PART NO. 7790642	
TP		TOLERANCES UNLESS OTHERWISE SPECIFIED	DECIMALS XX .01	DRAFTSMAN	CHECKER	SCREW, SELF-LOCKING	
YS		ANGLES $\pm 2^\circ$	XX .01	ENGINEER	DESIGNER		
EL 2		MATERIAL	XX .01	DESIGNER	DESIGNER		
RA		SEE NOTE 1.		ENGINEER	DESIGNER		
BH		HEAT TREATMENT		SUBMITTED		SCREW, SELF-LOCKING	
RH		FINAL PROTECTIVE FINISH		APPROVED			
APPLICATION		SEE NOTE 4.		Y.A. LUUKKONEN		DWG SIZE	CODE IDENT NO.
						C	19205 7790642
						SCALE 4/1	UNIT WT
							SHEET OF

[illegible]

SPRINGFIELD ARMORY SPRINGFIELD, MA 01101	7790641	SHEET 1 OF 1
THE B		

NOTES:

1. FINISH 125/
2. BREAK EDGES .005+.015 UNLESS OTHERWISE SPECIFIED.
3. HEAT TREATMENT FOR 6150:
HEAT AT 1575°F TO 1625°F. OIL QUENCH.
TEMPER 30 MIN TO RC 43 TO 48.
4. HEAT TREATMENT FOR 8620:
HEAT AT 1575°F TO 1625°F IN A CARBURIZING MEDIUM TO A CASE DEPTH OF .003 TO .008. OIL QUENCH.
TEMPER 30 MIN AT 350°F TO 375°F.
5. MISMATCH OF THE .125 AND .159 DIAMETERS PERMISSIBLE TO THE EXTENT THAT THE RESULTANT LENGTH OF SHOULDER IS WITHIN THE SPECIFIED LIMITS.
6. HEAT TREATMENT METHOD IS FOR GUIDANCE EXCEPT THAT TIME AT TEMPERATURE SHALL NOT BE REDUCED BELOW THAT SPECIFIED.



ALTERNATIVE DESIGN
SCALE 4/1

CURRENT DESIGN ACTIVITY CASE CODE 19200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07809-2000

PART NO. 7790638

PHYSICAL PROPERTIES		TOLERANCES ON DIMENSIONS UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE 18 DEC 59	
SP		LAUNCHER, M79		DESIGNED BY C.A. GORDON E.E.N.	
12	F7790600			DESIGNED BY C.A. GORDON E.E.N.	
15				DESIGNED BY C.A. GORDON E.E.N.	
18				DESIGNED BY C.A. GORDON E.E.N.	
21				DESIGNED BY C.A. GORDON E.E.N.	
24				DESIGNED BY C.A. GORDON E.E.N.	
27				DESIGNED BY C.A. GORDON E.E.N.	
30				DESIGNED BY C.A. GORDON E.E.N.	
33				DESIGNED BY C.A. GORDON E.E.N.	
36				DESIGNED BY C.A. GORDON E.E.N.	
39				DESIGNED BY C.A. GORDON E.E.N.	
42				DESIGNED BY C.A. GORDON E.E.N.	
45				DESIGNED BY C.A. GORDON E.E.N.	
48				DESIGNED BY C.A. GORDON E.E.N.	
51				DESIGNED BY C.A. GORDON E.E.N.	
54				DESIGNED BY C.A. GORDON E.E.N.	
57				DESIGNED BY C.A. GORDON E.E.N.	
60				DESIGNED BY C.A. GORDON E.E.N.	
63				DESIGNED BY C.A. GORDON E.E.N.	
66				DESIGNED BY C.A. GORDON E.E.N.	
69				DESIGNED BY C.A. GORDON E.E.N.	
72				DESIGNED BY C.A. GORDON E.E.N.	
75				DESIGNED BY C.A. GORDON E.E.N.	
78				DESIGNED BY C.A. GORDON E.E.N.	
81				DESIGNED BY C.A. GORDON E.E.N.	
84				DESIGNED BY C.A. GORDON E.E.N.	
87				DESIGNED BY C.A. GORDON E.E.N.	
90				DESIGNED BY C.A. GORDON E.E.N.	
93				DESIGNED BY C.A. GORDON E.E.N.	
96				DESIGNED BY C.A. GORDON E.E.N.	
99				DESIGNED BY C.A. GORDON E.E.N.	
102				DESIGNED BY C.A. GORDON E.E.N.	
105				DESIGNED BY C.A. GORDON E.E.N.	
108				DESIGNED BY C.A. GORDON E.E.N.	
111				DESIGNED BY C.A. GORDON E.E.N.	
114				DESIGNED BY C.A. GORDON E.E.N.	
117				DESIGNED BY C.A. GORDON E.E.N.	
120				DESIGNED BY C.A. GORDON E.E.N.	
123				DESIGNED BY C.A. GORDON E.E.N.	
126				DESIGNED BY C.A. GORDON E.E.N.	
129				DESIGNED BY C.A. GORDON E.E.N.	
132				DESIGNED BY C.A. GORDON E.E.N.	
135				DESIGNED BY C.A. GORDON E.E.N.	
138				DESIGNED BY C.A. GORDON E.E.N.	
141				DESIGNED BY C.A. GORDON E.E.N.	
144				DESIGNED BY C.A. GORDON E.E.N.	
147				DESIGNED BY C.A. GORDON E.E.N.	
150				DESIGNED BY C.A. GORDON E.E.N.	
153				DESIGNED BY C.A. GORDON E.E.N.	
156				DESIGNED BY C.A. GORDON E.E.N.	
159				DESIGNED BY C.A. GORDON E.E.N.	
162				DESIGNED BY C.A. GORDON E.E.N.	
165				DESIGNED BY C.A. GORDON E.E.N.	
168				DESIGNED BY C.A. GORDON E.E.N.	
171				DESIGNED BY C.A. GORDON E.E.N.	
174				DESIGNED BY C.A. GORDON E.E.N.	
177				DESIGNED BY C.A. GORDON E.E.N.	
180				DESIGNED BY C.A. GORDON E.E.N.	
183				DESIGNED BY C.A. GORDON E.E.N.	
186				DESIGNED BY C.A. GORDON E.E.N.	
189				DESIGNED BY C.A. GORDON E.E.N.	
192				DESIGNED BY C.A. GORDON E.E.N.	
195				DESIGNED BY C.A. GORDON E.E.N.	
198				DESIGNED BY C.A. GORDON E.E.N.	
201				DESIGNED BY C.A. GORDON E.E.N.	
204				DESIGNED BY C.A. GORDON E.E.N.	
207				DESIGNED BY C.A. GORDON E.E.N.	
210				DESIGNED BY C.A. GORDON E.E.N.	
213				DESIGNED BY C.A. GORDON E.E.N.	
216				DESIGNED BY C.A. GORDON E.E.N.	
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222				DESIGNED BY C.A. GORDON E.E.N.	
225				DESIGNED BY C.A. GORDON E.E.N.	
228				DESIGNED BY C.A. GORDON E.E.N.	
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234				DESIGNED BY C.A. GORDON E.E.N.	
237				DESIGNED BY C.A. GORDON E.E.N.	
240				DESIGNED BY C.A. GORDON E.E.N.	
243				DESIGNED BY C.A. GORDON E.E.N.	
246				DESIGNED BY C.A. GORDON E.E.N.	
249				DESIGNED BY C.A. GORDON E.E.N.	
252				DESIGNED BY C.A. GORDON E.E.N.	
255				DESIGNED BY C.A. GORDON E.E.N.	
258				DESIGNED BY C.A. GORDON E.E.N.	
261				DESIGNED BY C.A. GORDON E.E.N.	
264				DESIGNED BY C.A. GORDON E.E.N.	
267				DESIGNED BY C.A. GORDON E.E.N.	
270				DESIGNED BY C.A. GORDON E.E.N.	
273				DESIGNED BY C.A. GORDON E.E.N.	
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279				DESIGNED BY C.A. GORDON E.E.N.	
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288				DESIGNED BY C.A. GORDON E.E.N.	
291				DESIGNED BY C.A. GORDON E.E.N.	
294				DESIGNED BY C.A. GORDON E.E.N.	
297				DESIGNED BY C.A. GORDON E.E.N.	
300				DESIGNED BY C.A. GORDON E.E.N.	
303				DESIGNED BY C.A. GORDON E.E.N.	
306				DESIGNED BY C.A. GORDON E.E.N.	
309				DESIGNED BY C.A. GORDON E.E.N.	
312				DESIGNED BY C.A. GORDON E.E.N.	
315				DESIGNED BY C.A. GORDON E.E.N.	
318				DESIGNED BY C.A. GORDON E.E.N.	
321				DESIGNED BY C.A. GORDON E.E.N.	
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330				DESIGNED BY C.A. GORDON E.E.N.	
333				DESIGNED BY C.A. GORDON E.E.N.	
336				DESIGNED BY C.A. GORDON E.E.N.	
339				DESIGNED BY C.A. GORDON E.E.N.	
342				DESIGNED BY C.A. GORDON E.E.N.	
345				DESIGNED BY C.A. GORDON E.E.N.	
348				DESIGNED BY C.A. GORDON E.E.N.	
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408				DESIGNED BY C.A. GORDON E.E.N.	
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414				DESIGNED BY C.A. GORDON E.E.N.	
417				DESIGNED BY C.A. GORDON E.E.N.	
420				DESIGNED BY C.A. GORDON E.E.N.	
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498				DESIGNED BY C.A. GORDON E.E.N.	
501				DESIGNED BY C.A. GORDON E.E.N.	
504				DESIGNED BY C.A. GORDON E.E.N.	
507				DESIGNED BY C.A. GORDON E.E.N.	
510				DESIGNED BY C.A. GORDON E.E.N.	
513				DESIGNED BY C.A. GORDON E.E.N.	
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519				DESIGNED BY C.A. GORDON E.E.N.	
522				DESIGNED BY C.A. GORDON E.E.N.	
525				DESIGNED BY C.A. GORDON E.E.N.	
528				DESIGNED BY C.A. GORDON E.E.N.	
531				DESIGNED BY C.A. GORDON E.E.N.	
534				DESIGNED BY C.A. GORDON E.E.N.	
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579				DESIGNED BY C.A. GORDON E.E.N.	
582				DESIGNED BY C.A. GORDON E.E.N.	
585				DESIGNED BY C.A. GORDON E.E.N.	
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603				DESIGNED BY C.A. GORDON E.E.N.	
606				DESIGNED BY C.A. GORDON E.E.N.	
609				DESIGNED BY C.A. GORDON E.E.N.	
612				DESIGNED BY C.A. GORDON E.E.N.	
615				DESIGNED BY C.A. GORDON E.E.N.	
618				DESIGNED BY C.A. GORDON E.E.N.	
621				DESIGNED BY C.A. GORDON E.E.N.	
624				DESIGNED BY C	

NOTICE - When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever, and the fact that the Government may have furnished, furnished, or in any way supplied the said drawings, specifications or other data is not to be regarded by implication or otherwise as in any manner bounding the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

PHYSICAL PROPERTIES		DO NOT -80-		APPLY PART NO. -AS SPECIFIED-		REVISIONS			
YP		APPLICATION				SYM	DESCRIPTION	DATE	APPROVAL
TS		NEXT ARRY		USED ON		A.	SEE EO NO. SA 25660	17 JUN 60	W. H. ...
EL2		SEE ENGRG RECORDS				B	(1-3) SEE EO NO. SA 27673	30 NOV 64	Grant
RA		F7790600		LAUNCHER,		C	(1) SEE EO NO. SA 29433	22 JUL 66	Grant
BH				M79		D	(1-2) SEE EO 82000	5 FEB 68	P. Hebert
RM	C40 TO 45					E	ERR 2921175AK (ECP W952019/790629)	890913	298

(USED WITH RECEIVER - 7790640) (B1)

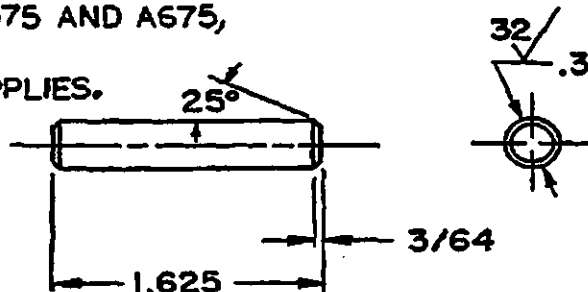
NOTES:

- 125/EXCEPT AS NOTED. (B2)
- HEAT TREATMENT:
HEAT AT 1500° TO 1550° F. OIL QUENCH.
TEMPER TO HARDNESS SPECIFIED.
HEAT TREATMENT METHOD IS FOR
GUIDANCE ONLY.

- STEEL, COMP 1085 OR 1095
SPEC ASTM A575 AND A675,
ASTM. A106.

- MIL-W-13855 APPLIES.

(D1)



CURRENT DESIGN ACTIVITY CAGE CODE 19200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07806-5000

CODE IDENT NO. 19205
PART NO. 7790637 (D2)

UNLESS OTHERWISE SPECIFIED	ORIGINAL DATE OF DRAWING 4 DEC 59	PIN, STRAIGHT, HEADLESS		SPRINGFIELD ARMORY, SPRINGFIELD, MA		
DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ±1/64 ±.005 ±1°	DRAFTSMAN NEW					CHECKER EGW
MATERIAL SEE NOTE 3	TRACER NEW					CHECKER RSK
HEAT TREATMENT SEE NOTE 2	ENGR KEA					ENGR ...
FINAL PROTECTIVE FINISH FINISH NO. 5.3.1.2 OR 5.3.2.2 OF MIL-STD-171	APPROVED BY ORDER OF THE CHIEF OF ORDNANCE <i>H. J. ...</i> ORD CORPS	SCALE 1/1	DWG SIZE A	7790637		
		UNIT WT		SHEET 1 OF 1		

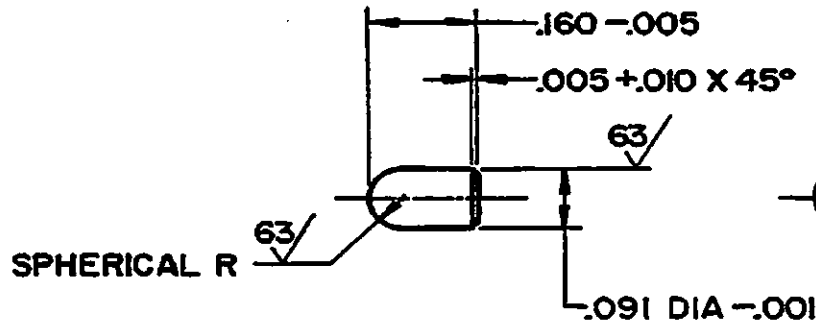
REF DWG SA-A34604

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PHYSICAL PROPERTIES		DO NOT -D-	APPLY PART NO. -A- SPECIFIED	REVISIONS			
YP		APPLICATION		SYM	DESCRIPTION	DATE	APPROVAL
TS		NEXT ASSY	USED ON	A2	SEE EO NO. 3A25660	17 JUN 60	<i>[Signature]</i>
EL2		SEE ENGRG RECORDS		B	(1-2) SEE EO NO. SA27673	30 NOV 64	<i>[Signature]</i>
RA		F 7790600 LAUNCHER,		C	(1) SEE EO NO. SA29433	22 JUL 66	<i>[Signature]</i>
BH		M 79		D	(1-4) SEE EO RIA-13919	1.18.67	<i>[Signature]</i>
RH	C55 MIN			E	ERR Z9Z1175AK (ECP W9S2019/790629)	890913	<i>[Signature]</i>

NOTE:

1. STEEL, Q1,
ASTM A400-69
2. FINISH $\sqrt{125}$ EXCEPT AS NOTED.
3. MIL-W-13855 APPLIES.



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CODE IDENT NO. 19205
PART NO. 7790634

UNLESS OTHERWISE SPECIFIED	ORIGINAL DATE OF DRAWING 16 OCT 59	PLUNGER, SAFETY SPRING		SPRINGFIELD ARMORY SPRINGFIELD, MA. 01101		
DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ±P	DRAFTSMAN J.C.F.					CHECKER G.O.D.
MATERIAL SEE NOTE 1	TRACER <i>[Signature]</i>					CHECKER <i>[Signature]</i>
HEAT TREATMENT AS REQD	ENGR <i>[Signature]</i>					ENGR C.S.B.
FINAL PROTECTIVE FINISH FINISH NO. 53.1.2 OR 53.2.2 OF MIL-STD-171	APPROVED BY ORDER OF THE CHIEF OF ORDNANCE <i>[Signature]</i> ORD CORPS	SCALE 4/1	DWG SIZE A	7790634		
		UNIT WT		SHEET 1	OF 1	

REF DWG SA-A34614

PDC

NOTES:

1. MATERIAL:

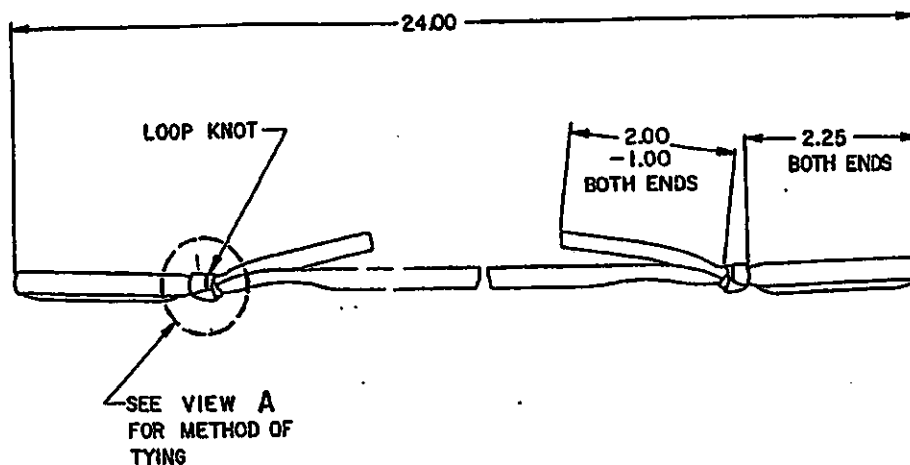
LACE, NYLON, TYPE I, CLASS I,
OLIVE DRAB NO. 34052 THROUGH
34102 OF FED. STD. 595, SPEC V-L-61.
APPROX. DEV. LENGTH = 36 INCHES

2. ENDS OF CORD SHALL BE HEAT SEALED
TO PREVENT RAVELING

3. EACH LOOP SHALL BE CAPABLE OF
WITHSTANDING A GRADUALLY APPLIED
50 LB. LOAD WITHOUT SLIPPING.

4. MIL-W-13855 APPLIES. (B)

REVISIONS				
NO.	DATE	BY	DESCRIPTION	APPROVED
1	4 NOV 60	A	REDRAWN W/CHG SEE ED HND 82294	W. R. Del
2	3 MAY 72	B	(2) SEE ERR HND 80684	W. R. Del



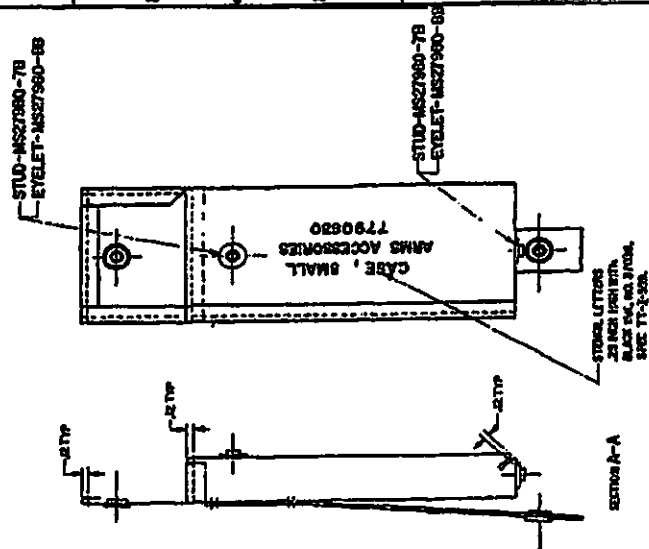
VIEW A

(B)

PART NO. 7790631

DISTRIBUTION STATEMENT A:
"APPROVED FOR PUBLIC RELEASE:
DISTRIBUTION IS UNLIMITED."

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING 23 MAY 61	DEPT OF THE ARMY ROCK ISLAND ARSENAL ROCK ISLAND, ILL. 61201	
YP		TOLERANCES ON	DECIMALS X .25	THONG, BRUSH		DWG SIZE C CODE COUNT NO. 19204 7790631
TS		ANGLES & MATERIAL	X .125			
EL 2		SEE NOTE 1				
RA		HEAT TREATMENT				
DN	B8449881	BRUSH ASSY, 40 MM		APPROVED W. R. Del		SCALE 1/1 UNIT 01 SHEET 1 OF 1
RM		NEXT ASSY. USED ON	FINAL PROTECTIVE FINISH			
		APPLICATION				



182109 JES
WOS-7-LL 2348
WOS/ WOS 2348
WOS/ WOS 2348

EXHIBIT 2-A

800Y-1
(631071)

REPLY TO LETTERS ON THIS — — — — — OF — — — — —

[illegible]

Results:

[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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REVISIONS		
S/N	DESCRIPTION	DATE APPROVED
A4	SEE EO NO. SA25660	17 JUN 60
B	(1-7) SEE EO NO. SA27673	30 NOV 64
C	(1-2) SEE EO 82000	5 FEB 68
D	ERR 2921175AK (ECP W952019/790629)	890913
E	NOR GIS2017/910510	910611

1. FINISH 63/ EXCEPT AS NOTED. (A)

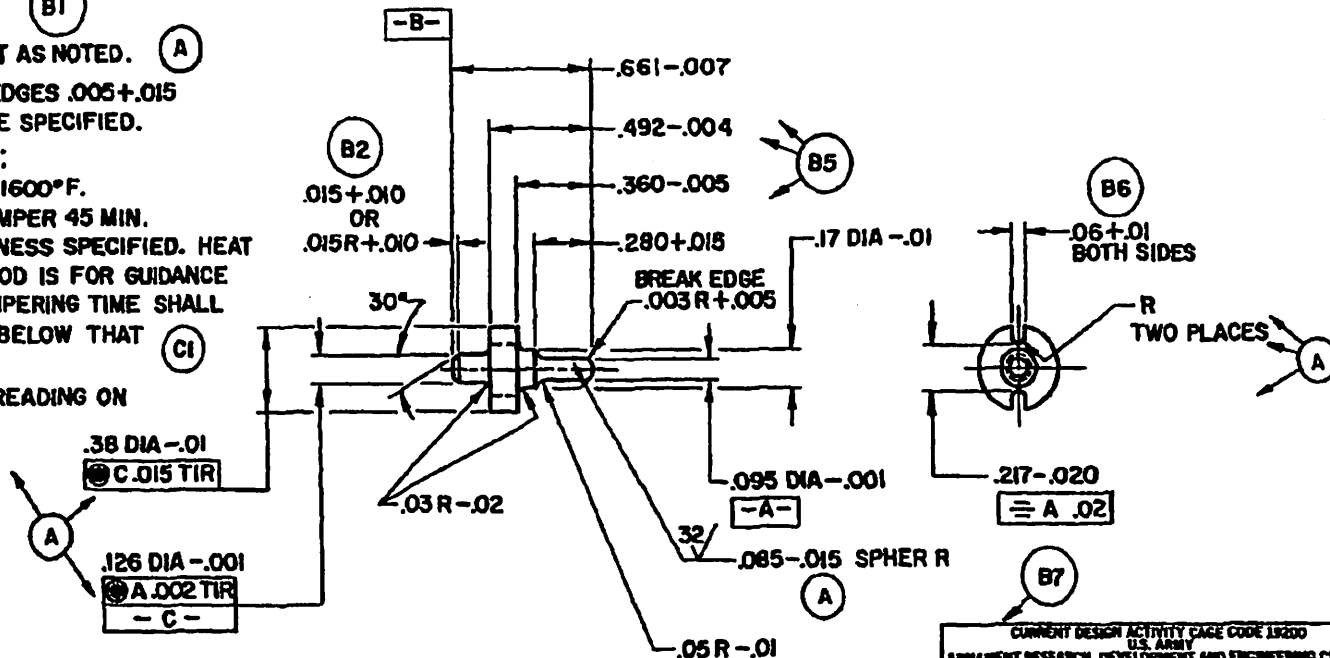
2. BREAK EXTERIOR EDGES .005+.015 UNLESS OTHERWISE SPECIFIED.

3. HEAT TREATMENT:
HEAT AT 1575° TO 1600°F.
QUENCH IN OIL, TEMPER 45 MIN.
AT HEAT TO HARDNESS SPECIFIED. HEAT TREATMENT METHOD IS FOR GUIDANCE ONLY EXCEPT TEMPERING TIME SHALL NOT BE REDUCED BELOW THAT SPECIFIED. (C)

4. TAKE HARDNESS READING ON SURFACE "B".

5. MIL-W-13355 APPLIES

.38 DIA - .01
C.015 TIR



CODE IDENT NO. 19205
PART NO. 7790628

		PHYSICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING		<div>PIN, FIRING</div>		<div>SPRINGFIELD ARMORY, SPRINGFIELD, MA 01101</div>	
		7P		DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES 2 1°		4 DEC 59					
LAUNCHER,	7S			MATERIAL STEEL ALLOY, ASTM- A322 A331-650		DRAWN BY C.B. CHECKED E.C.H.					
F7790600	M79	E12	RA			TOLERANCE 1.05 CHECKED J.S.H.					
SEE ENGRG RECORDS				HEAT TREATMENT		ENG. REAR PLX		<div>W. Harkness</div>		<div>7790628</div>	
NEXT ASSY	USED ON	BN		SEE NOTE NO.3		APPROVED BY					
APPLICATION			A72	FINAL PROTECTIVE FINISH		CHECKED BY		SCALE 2/1		UNIT WT	
DO NOT	APPLY PART NO.	M79	TO 75	FIN. MIL-STD-171		<div>J. E. Lavelle</div>		SHEET 1		OF 1	
AS SPECIFIED								B			

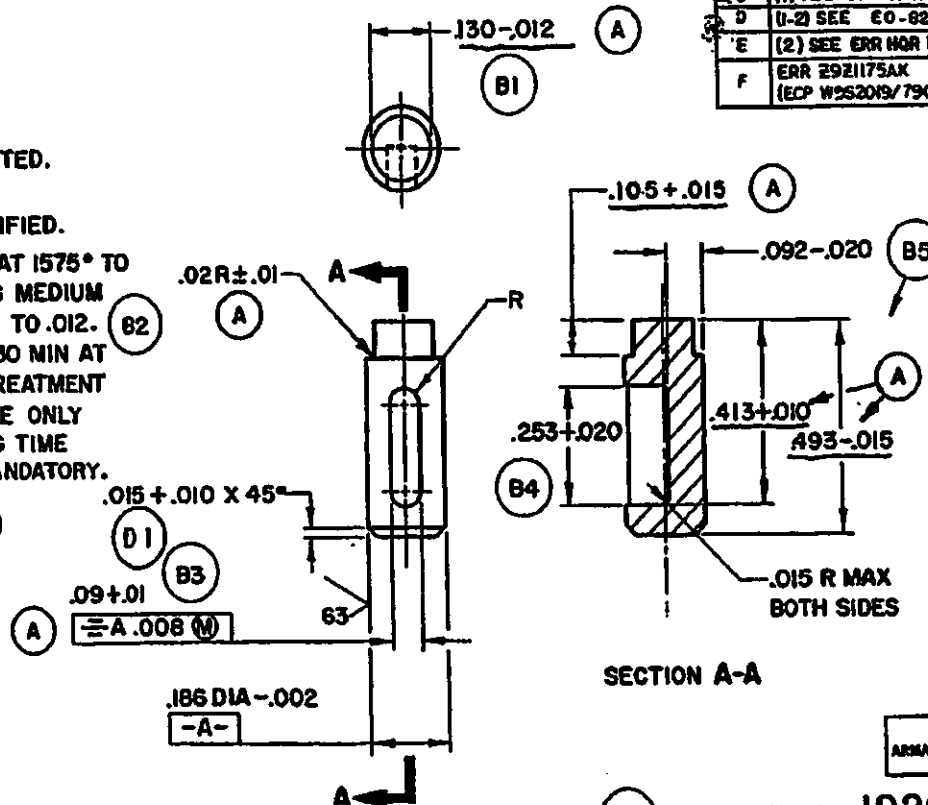
7

87790624

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A	SEE EO NO. SA 26115	19 APR 61	REAR
B	(1-6) SEE EO NO. SA 27673	30 NOV 64	REAR
C	(1) SEE EO NO. SA 29433	22 JUL 68	REAR
D	(1-2) SEE EO-82000	6 FEB 68	REAR
E	(2) SEE ERR HQR 10784	25 JAN 71	REAR
F	ERR 2921175AK (ECP W952019/790629)	890913	REAR

NOTES:

1. FINISH 125/ EXCEPT AS NOTED.
2. BREAK EDGES .003+.007 UNLESS OTHERWISE SPECIFIED.
3. HEAT TREATMENT: HEAT AT 1575° TO 1600° F IN A CARBURIZING MEDIUM TO A CASE DEPTH OF .006 TO .012. QUENCH IN OIL. TEMPER 30 MIN AT 350° TO 375° F. HEAT TREATMENT METHOD IS FOR GUIDANCE ONLY EXCEPT THAT TEMPERING TIME AND HARDNESS ARE MANDATORY.
4. MIL-W-13855 APPLIES.
5. MATERIAL: STEEL, ASTM A575 AND A675 OR ASTM A108, 1018, 1020, 1022.



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PEABODY ARSENAL, NEW JERSEY 07805-5000

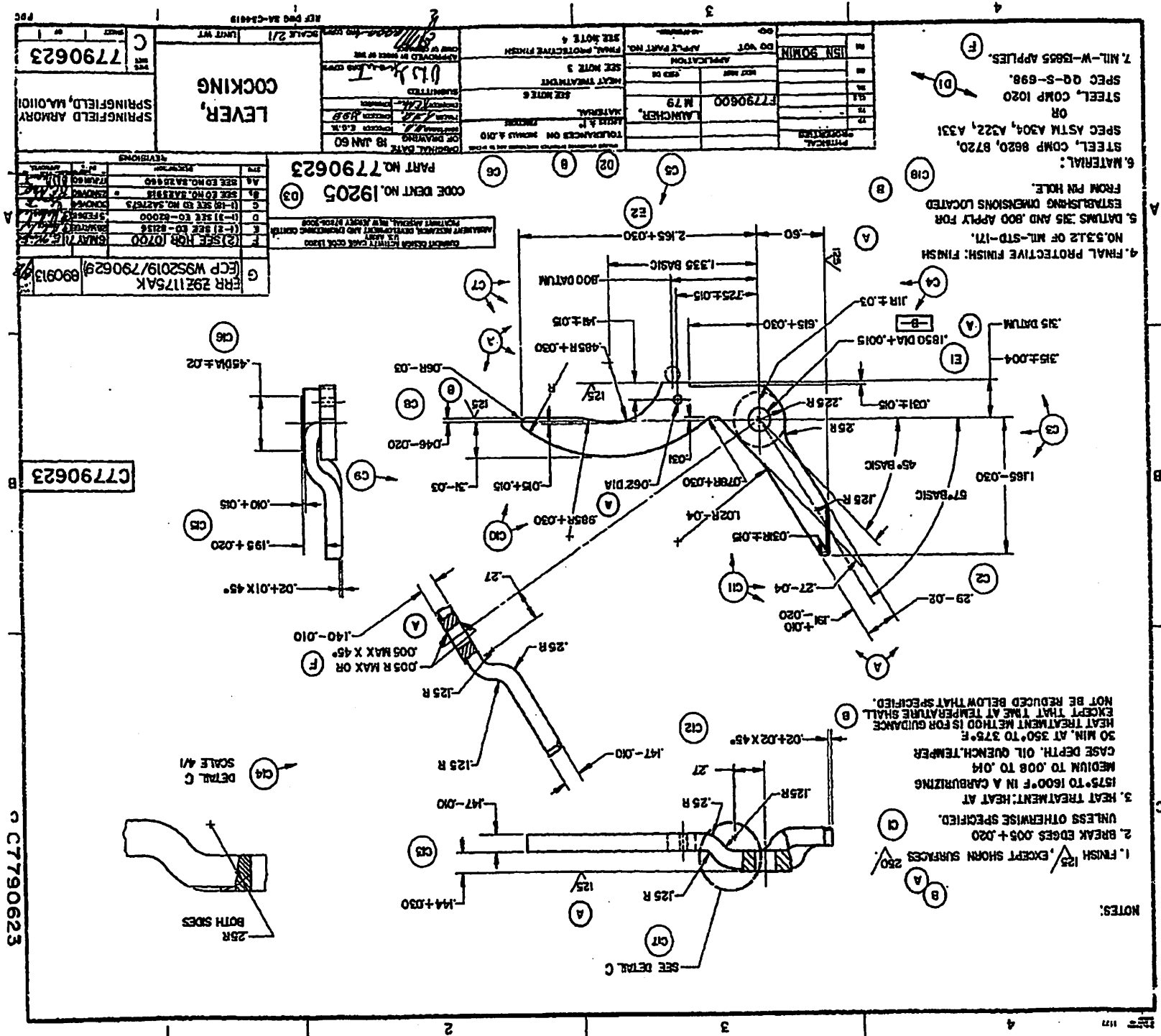
CODE IDENT NO. 19205

PART NO. 7790624

LAUNCHER		PHYSICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING		LOCK, LATCH		SPRINGFIELD ARMORY, SPRINGFIELD, MA 01101	
7790600 M79		VP		DIMENSIONS ARE IN INCHES		4 DEC 59					
SEE ENGRG RECORDS		TS		TOLERANCES ON FRACTIONS DECIMALS ANGLES 2°		DESIGNED BY					
1/2 ST ASSY		EL2		MATERIAL		DRAWN BY					
APPLICATION		RA		HEAT TREATMENT		SUBMITTED		SCALE 4/1 UNIT W1		7790624	
DO NOT APPLY PART NO.		SH		SEE NOTE 5		APPROVED BY					
FILE HARD		EN		HEAT TREATMENT		CHIEF OF DESIGN					
		SEE NOTE 4		FINAL PROTECTIVE FINISH		1/2 ST ASSY					
				FINISH NO. 8.3.1.2 OF MIL-STD-171							

REF DWS SA-A34610

PDC



4

21906228

SYM	DESCRIPTION	DATE	APPROVAL
J	NOR L9S2029/991207	991217	BAC

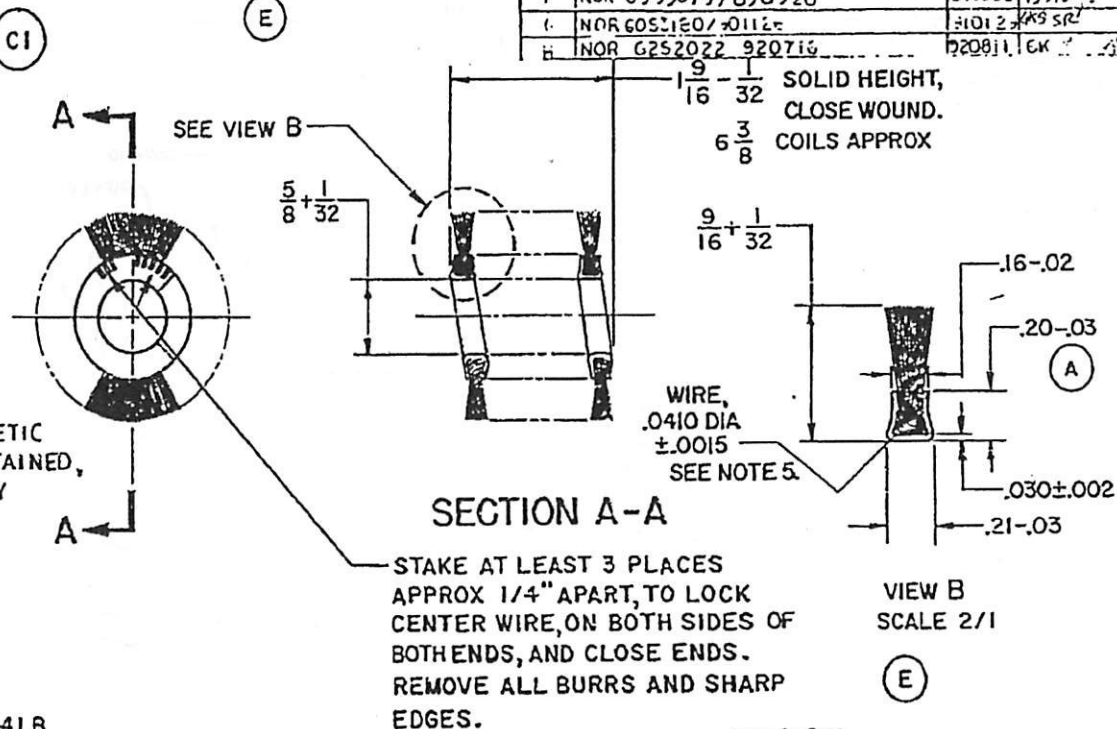
SYM	DESCRIPTION	DATE	APPROVAL
A ₅	SEE EO NO. SA 25890	27OCT60	REAR
B ₁	SEE EO NO. SA 26117	21 APR 61	REAR
C	(1-5) SEE EO NO. SA 27865	12 MAR 65	REAR
D	(1) SEE EO NO. SA 28204	7 SEP 65	REAR
E	(4) SEE ERR HQR 20684	3 MAY 72	REAR
F	NOR G953073/890928	391206	REAR
G	NOR G051201/0112	31012	REAR
H	NOR G252022 920716	020811	REAR

NOTES:

1. MIL-B-20100 APPLIES.
2. STEEL CHANNEL, SPEC QQ-S-698, CR, ANY COMPOSITION, TEMPER NO. 4 OR 5 SHALL BE FILLED WITH A MIXTURE, BY WEIGHT, OF 40% SYNTHETIC POLYAMIDE FILAMENT BRISTLES .007 TO .014 DIA. AND 60% .005 DIAMETER WIRE, COPPER ALLOY NO. 510, SPRING TEMPER AND COILED LEFT HAND AS SHOWN.

ALTERNATIVE: STAINLESS STEEL, TYPE 430 CONDITION A, ROUND WIRE, .005 DIA., ASTM-A580 MAY BE USED INSTEAD OF COPPER WIRE. IF SYNTHETIC FILAMENT BRISTLES CANNOT BE OBTAINED, BLACK OR GRAY HORSETAIL HAIR MAY BE SUBSTITUTED.

5. CENTER WIRE SHALL CONFORM TO ASTM-A853, BARE, ANNEALED.
6. MIL-W-13855 APPLIES.



4. TOTAL WEIGHT OF BRISTLES SHALL BE .10 ± .04 LB UNTRIMMED. WEIGHT BASED ON BRISTLE LENGTH OF 1 1/2 INCHES.

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PICATINNY ARSENAL, NEW JERSEY 07806-5000

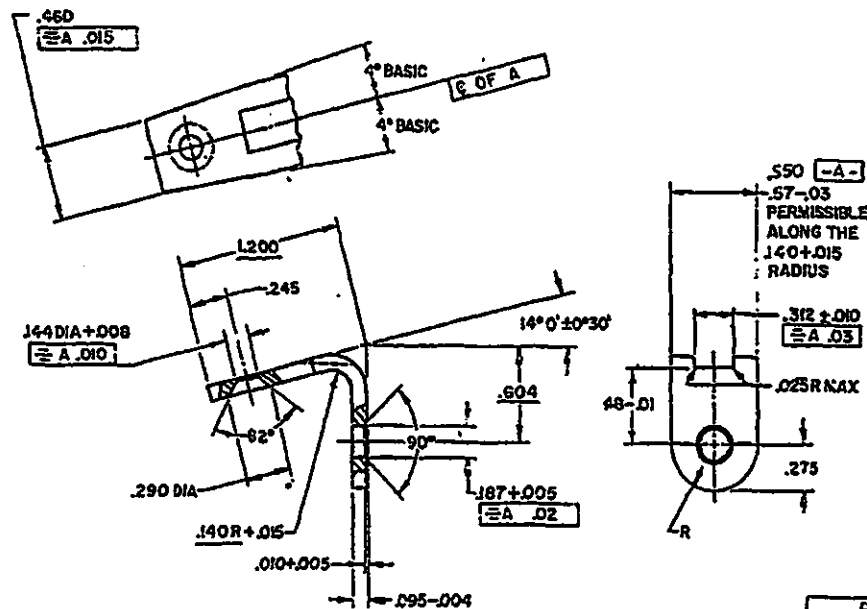
CODE IDENT NO. 19205

PART NO. 7790617

B	C3269511	PHYSICAL PROPERTIES	UNLESS OTHERWISE SPECIFIED	ORIGINAL DATE OF DRAWING	BRUSH, 40 MM	SPRINGFIELD ARMORY
	B7790665 BRUSH	YP	DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES	15 APR 60		
C4	B11010305 ASSEMBLY	YS	MATERIAL	SEE NOTE 2	7790617	SHEET 1 OF 1
	40MM	EL3	HEAT TREATMENT			
E	DO NOT APPLY PART NO. UNLESS SPECIFIED	RA	FINAL PROTECTIVE FINISH FOR CHANNEL ONLY: FINISH NO. 1-9.1.3 OR 1-9.4 OF MIL-STD-171			
		RM				

NOTES:

1. MATERIAL: STEEL, CARBON, ASTM A682, A684 1055, 1065.
2. FINISH: 250/EDGES ONLY, 125/GENERAL MACHINING.
3. BREAK EXTERIOR EDGES .005 + .020.
4. HEAT TREATMENT: HEAT AT 1525° TO 1550° F. OIL QUENCH, TEMPER 30 MIN. AT HEAT TO HARDNESS SPECIFIED. HEAT TREATMENT METHOD IS FOR GUIDANCE EXCEPT THAT TIME AT TEMPERATURE SHALL NOT BE REDUCED BELOW THAT SPECIFIED.
5. FINAL PROTECTIVE FINISH: FINISH 5.3.1.2 OF MIL-STD-171.
6. MIL-V-13855 APPLIES.



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PICATINNY ARSONAL, NEW JERSEY 07806-5000

DO NOT APPLY PART NUMBER

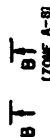
PART NO. 7790614

MECHANICAL PROPERTIES VP TS CE RA BH RN 172-75		DO NOT SCALE DRAWING		ORIGINAL DATE OF DRAWING		SPRINGFIELD ARMY	
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		4 DEC. 59		SPRINGFIELD MA., 01101	
		TOLERANCES ON DECIMALS = .010		DRAFTSMAN		CHECKER	
		FRACTIONS = ANGLES = /°		R.H.		R.K.	
C7790613 LAUNCHER M79		THIRD ANGLE PROJECTION		ENGR		ENGR	
SEE ENGINEERING RECORDS		SUBMITTED		V.A. LUNSONEN		SCALE 2/1	
NEXT ASSY USED CS		APPROVED		H.F. LYNCH		C 19205 7790614	
APPLICATION						SHEET 1 of 1	

五

NOTES
1. BREAK ENDS .005 + .020 UNLESS OTHERWISE SPECIFIED.
2. MATERIAL:

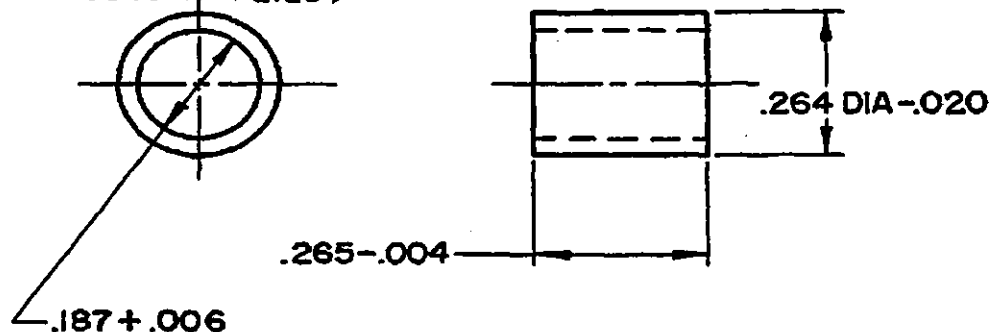
**SAND AND BLEND
INTERSECTIONS.**

[illegible]

PHYSICAL PROPERTIES		DO NOT	APPLY PART NO.	REVISIONS			
		88-	AS SPECIFIED	SYM	DESCRIPTION	DATE	APPROVAL
YP			APPLICATION	A	(1-3) SEE EO NO. SA 27673	30 NOV 64	<i>[Signature]</i>
TS			NEXT ASSY	B	(1-2) SEE EO 82000	5 FEB 68	<i>[Signature]</i>
EL2			USED ON	C	(1) SEE EO HRD 92234	6 NOV 69	<i>[Signature]</i>
RA			SEE ENGRG RECORDS:	D	ERR Z9Z1175AK	890913	<i>[Signature]</i>
BH			F7790600 LAUNCHER		(ECP W9S2019/790629)		
RM			M79				

NOTES:

1. FINISH 125/.
2. REMOVE BURRS AND SHARP EDGES.
3. MATERIAL: TUBING, STEEL, CARBON, SEAMLESS OR WELDED: FED. STD. NO. 66 1115, 1116, 1117, 1118, SAE 1115 OR TUBING, STEEL, SEAMLESS, COMP 1118, SPEC ASTM A519
4. MIL-W-13855 APPLIES.



CODE IDENT NO. 19205

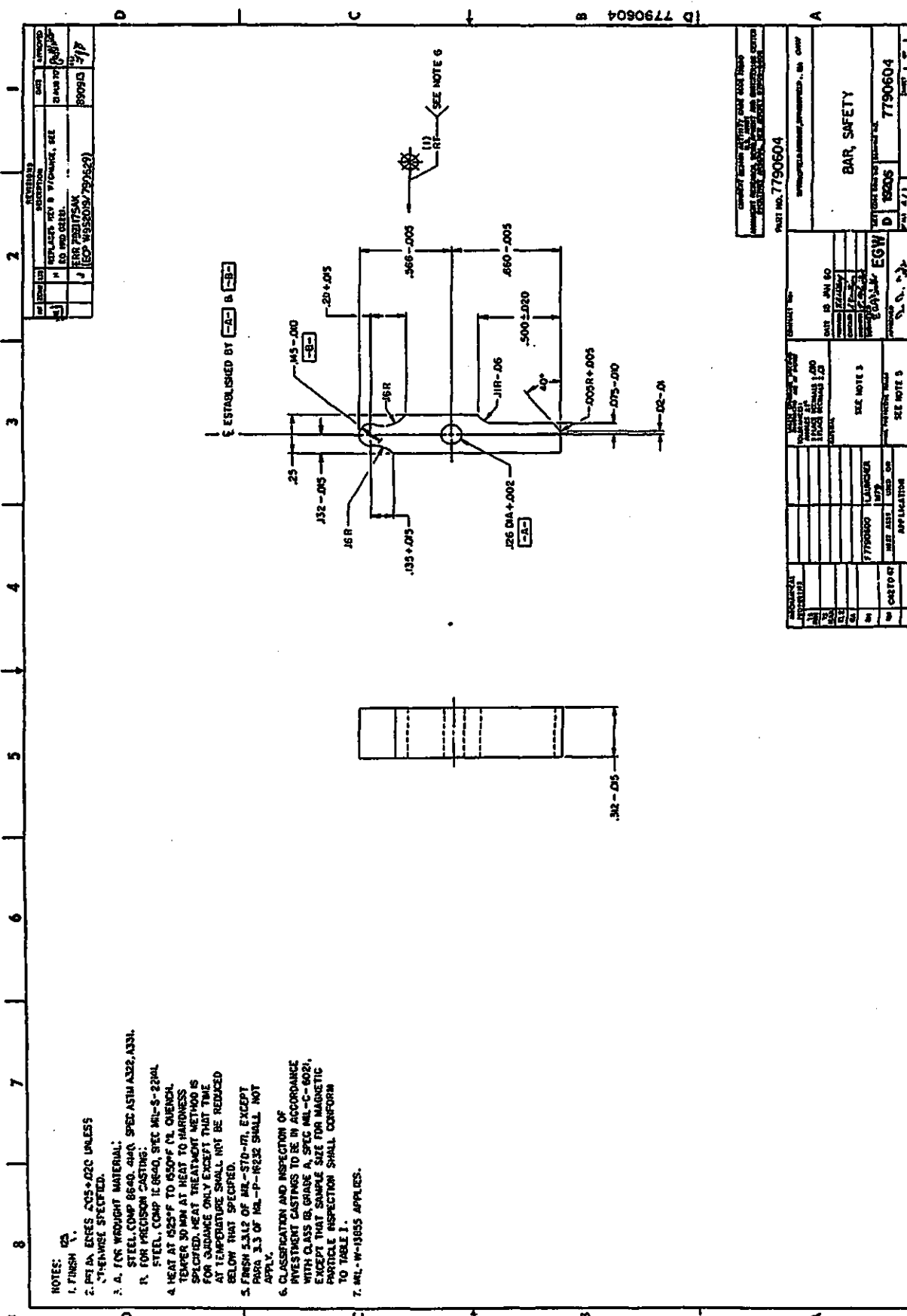
PART NO. 7790606

UNLESS OTHERWISE SPECIFIED	ORIGINAL DATE OF DRAWING 4 DEC 59	BUSHING, HAMMER SPRING		SPRINGFIELD ARMORY SPRINGFIELD MA, 01101	
DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES	DRAFTSMAN J. J. 23	CHECKER E. J. 2			
MATERIAL SEE NOTE 3	TRACER L. A. 5	CHECKER E. J. 2			
HEAT TREATMENT	EXOR R. E. A. 10	CHECKER E. J. 2			
FINAL PROTECTIVE FINISH FINISH NO. 5.3.1.2 OR 5.3.2.2 OF MIL-STD-171	SUBMITTED	ORD CORPS	SCALE 4/1	DWG SIZE A	7790606
	APPROVED BY ORDER OF THE CHIEF OF ENGINEERING		UNIT WT	SHEET 1	OF 1

REF DWG SA-A34621

PDC

CURRENT DESIGN ACTIVITY PAGE CODE 19200
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PICATINNY ARSENAL, NEW JERSEY 07806-5000



NOTES:

2. FINISH T.
 3. PRIN. EYES. COB+D2C UNLESS
 OTHERWISE SPECIFIED.
 4. A. A. P. FOR WOODRUM MATERIAL;
 STEEL COMP 8640. 4H40. SPEC ASTM A322, A333.
 5. FOR PRECISION CASTING:
 STEEL, COMP 15 9640, SPEC MIL-S-2240L.
 6. HEAT AT 1625°F TO 4500°F TO HARDEN.
 TEMPER 30 MIN AT HEAT TO HARDNESS.
 7. SPECIFIED HEAT TREATMENT METHOD IS
 FOR ADJANCE ONLY EXCEPT THAT TIME
 AT TEMPERATURE SHALL NOT BE REDDED
 BELOW THAT SPECIFIED.
 8. FINISH 5.312 OF MIL-870-17H, EXCEPT
 PARA 3.3 OF MIL-P-8232 SHALL NOT
 APPLY.
 9. CLASSIFICATION AND INSPECTION OF
 INVESTMENT CASTINGS TO BE IN ACCORDANCE
 WITH CLASS B, GRADE A, SPEC MIL-C-8021,
 EXCEPT THAT SAMPLE SIZE FOR MAGNETIC
 PARTICLE INSPECTION SHALL CONFORM
 TO TABLE 1.
 10. MIL-W-18555 APPLIES.

CLASSIFICATION AND INSPECTION OF INVESTMENT CASTINGS TO BE IN ACCORDANCE WITH CLASS B, GRADE A, SPEC MIL-C-6021, EXCEPT THAT SAMPLE SIZE FOR MAGNETIC PARTICLE INSPECTION SHALL CONFORM TO TABLE I.

7. MZL-W-13855 APPLIES.

ONLY FOR THE U.S.A.

Page No. 7790604

STANDARDIZATION OF THE DATA

BAR SAFETY

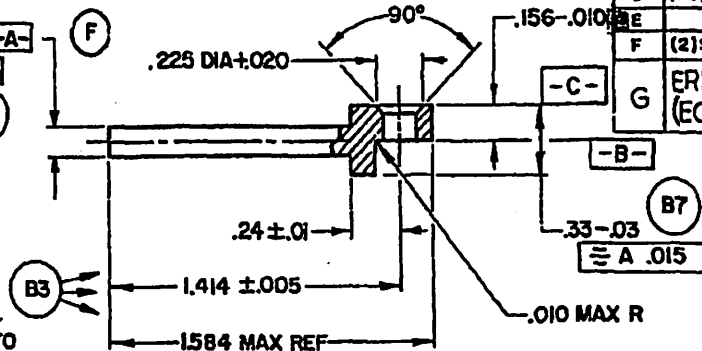
3205 7790604

NOTES:

1. FINISH 125/
2. BREAK EDGES .005+.020 UNLESS OTHERWISE SPECIFIED.
3. HEAT TREATMENT: HEAT AT 1575°F TO 1625°F IN A CARBURIZING MEDIUM TO A CASE DEPTH OF .004 TO .008. OIL QUENCH. TEMPER 30 MIN TO HARDNESS SPECIFIED. HEAT TREATMENT METHOD IS FOR GUIDANCE EXCEPT THAT TEMPERING TIME AND HARDNESS ARE MANDATORY.
4. TAKE HARDNESS READING ON SURFACES -B- OR -C-.
5. MATERIAL: STEEL, ASTM A103 1020, 1018, AUSTENITE GRAIN SIZE NO.5 OR FINER.
6. MIL-W-13855 APPLIES.

125DIA -A-
= B .010

B2


A
C1

B4

D1

F

C2

B5

CODE IDENT NO. 19205

PART NO. 7790601

C3

CURRENT DESIGN ACTIVITY CAGE CODE 19200
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PICATONNY ARSENAL, NEW JERSEY 07806-5000

10906228
B7790601

REV	DESCRIPTION	DATE	APPROVAL
A1	SEE EO NO. SA 25660	17 JUN 60	(1) J. K. ...
B	(1-8) SEE EO NO. SA 27673	30 NOV 64	(1) J. K. ...
C	(1-3) SEE EO NO. SA 29433	22 JUL 66	(1) J. K. ...
D	(1-3) SEE EO - 82000	5 FEB 68	(1) J. K. ...
E	SEE EO HQR 82177	17 JUL 68	(1) J. K. ...
F	(2) SEE ERR HQR 10784	25 JAN 71	(1) J. K. ...
G	ERR Z9Z1175AK (ECP W9S2019/790623)	890913	(1) J. K. ...

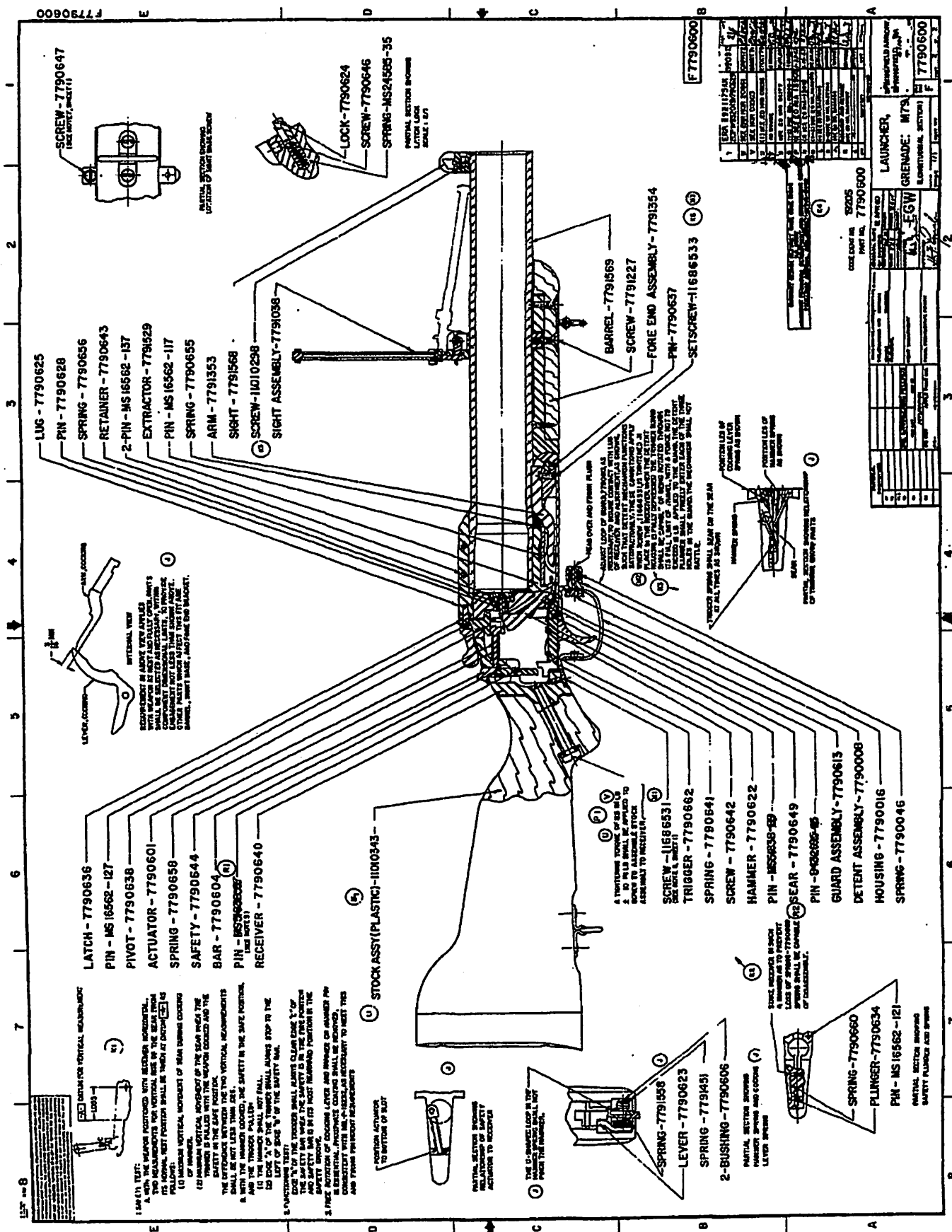
PHYSICAL PROPERTIES	
YP	
TS	
ELZ	
RA	
BH	
SEE NOTE 6	
FILE HARD	

UNLESS OTHERWISE SPECIFIED		
DIMENSIONS ARE IN INCHES		
TOLERANCES ON	DECIMALS	ANGLES
FRACTIONS	±.005	±2°
MATERIAL		
SEE NOTE 5		
HEAT TREATMENT		
SEE NOTE 3		
FINAL PROTECTIVE FINISH		
FINISH NO. 5.3.1.2 OR 5.3.2.2		
OF MIL-STD-IT		

ORIGINAL DATE OF DRAWING	18 DEC 59
DRAWN BY	889
CHECKED BY	889
INCHES	1/16
DETAILED BY	889
DATE	18 DEC 59
SUBMITTED	18 DEC 59
APPROVED BY	18 DEC 59
DATE	18 DEC 59

ACTUATOR, SAFETY	
SCALE	2/1
UNIT WT	

SPRINGFIELD ARMORY SPRINGFIELD, MA 01101	
DATE	7790601
SHEET	1 OF 1

[illegible]

UNNUNCHER,	GRADE: M79	77906000
	(TUBULAR SECTION)	F

[illegible]

NAME	DATE
ADDRESS	
CITY	
STATE	
ZIP	
TELEPHONE	
TELETYPE	
FAX	
E-MAIL	
INTERNET	
OTHER	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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1. WITH THE LAUNCHER IN THE OPEN POSITION, THE LAUNCHER SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:

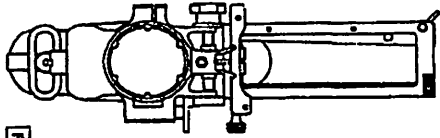
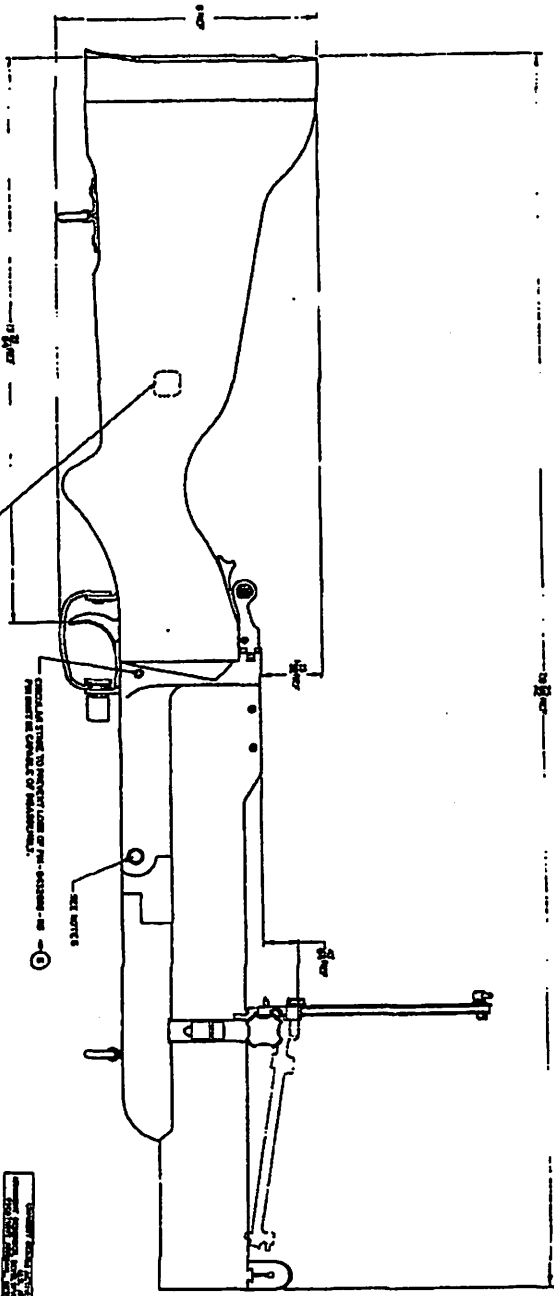
2. DURING THE PERIODIC SHOCK TESTING, THE LAUNCHER SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:

3. THE LAUNCHER SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:

4. THE LAUNCHER SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:

5. THE LAUNCHER SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:

6. THE LAUNCHER SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:



1. THE LAUNCHER SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:
2. DURING THE PERIODIC SHOCK TESTING, THE LAUNCHER SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:
3. THE LAUNCHER SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:
4. THE LAUNCHER SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:
5. THE LAUNCHER SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:
6. THE LAUNCHER SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING LOADS:

FOR LIST OF PARTS, DRAWING AND SPECIFICATION, SEE DRAWING 7790600.

DATE: 1970-08-01

REV: 1

LAUNCHER

7790600

NOTES:

1. FINISH $\sqrt{125}$ ALL OVER.
2. BREAK EDGES .010+.015 UNLESS OTHERWISE SPECIFIED.

3. MATERIAL:

A. FOR WROUGHT MATERIAL: STEEL, CARBON, ASTM-A108: G11370, G11410.

B. FOR INVESTMENT CASTING: STEEL, COMP IC8640, IC4140, SPEC MIL-S-22141.

4. CLASSIFICATION AND INSPECTION OF INVESTMENT CASTINGS SHALL BE IN ACCORDANCE WITH CLASS 3, GRADE C, SPEC MIL-STD-2175 EXCEPT THAT SAMPLE SIZE FOR MAGNETIC PARTICLE INSPECTION SHALL CONFORM TO TABLE I.

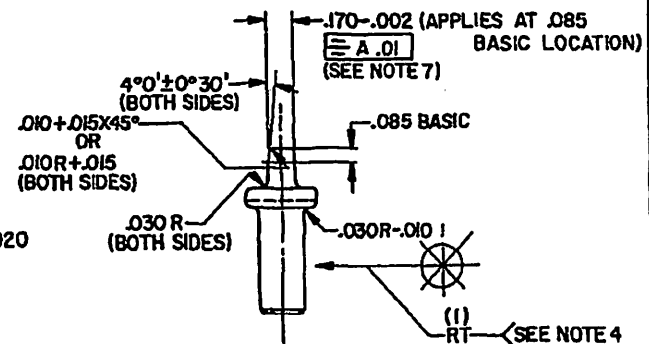
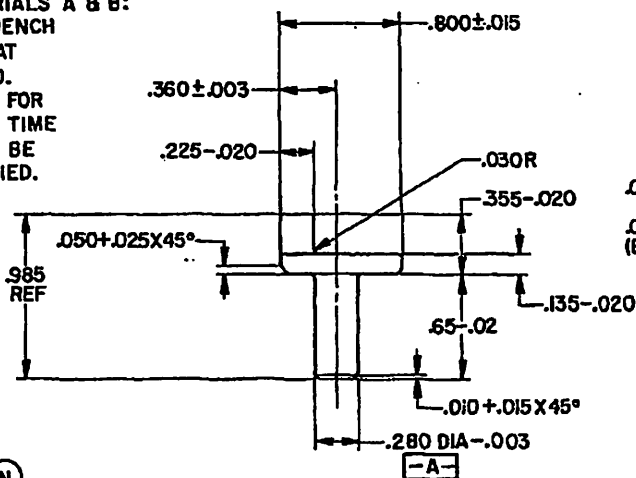
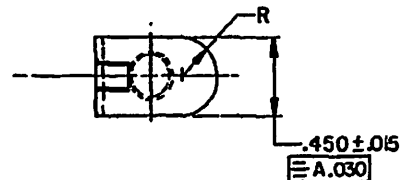
5. HEAT TREATMENT FOR MATERIALS A & B: HEAT AT 1525° TO 1575° F. QUENCH IN OIL. TEMPER 45 MINUTES AT HEAT TO HARDNESS SPECIFIED. HEAT TREATMENT METHOD IS FOR GUIDANCE ONLY EXCEPT THAT TIME AT TEMPERATURE SHALL NOT BE REDUCED BELOW THAT SPECIFIED.

6. FINAL PROTECTIVE FINISH: FINISH 5.3.1.2 OF MIL-STD-171.

7. WHEN LOCK IS CAST TO SPECIFICATION MIL-S-22141, THE SURFACES CONTROLLED BY THE .170-.002 DIMENSION WILL BE MACHINED.

8. MIL-W-13855 APPLIES.

REVISIONS				
REV	ZONE	LTR	DESCRIPTION	DATE
1		L	REDRAWN WITH CHANGE	
2		M	SEE EO HRD 92062	28 APR 69
3		M	(1) SEE EO HRD 92097	6 JUN 69
4		M	(2) SEE E.O. HRD 02121	1 MAY 70
5		C	EDR Z921175AT (ECP W952013/730627) (ECP W352008/830520) (ECP 6852085/830321)	390313



CURRENT DESIGN ACTIVITY CASE CODE 19200
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PART NO. 7790061

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING 2 DEC 58	
TP		TOLERANCES ON DECIMALS		DESIGNED BY	EGW
TS		ANGLES ± 1°		DRAWN BY	EGW
EL 2		MATERIAL		CHECKED BY	EGW
RA		SEE NOTE 3		SUBMITTED BY	EGW
EH		HEAT TREATMENT		APPROVED BY	EGW
PH	C35-40	SEE NOTE 5		APPROVED BY	EGW
		FINAL PROTECTIVE FINISH		APPROVED BY	EGW
		SEE NOTE 6		APPROVED BY	EGW

SPRINGFIELD ARMORY,
SPRINGFIELD, MA

LOCK;SIGHT

DWG SIZE	CODE IDENT NO.	7790061
C	19205	
SCALE 2/1	UNIT WT	SHEET 1 OF 1

NOTES:

1. MATERIAL:
WIRE, MUSIC, SPEC QQ-W-470.
2. HEAT TREATMENT:
AFTER FORMING, STRESS RELIEVE AT
450° F FOR 20 MIN AT HEAT.
3. FINAL PROTECTIVE FINISH:
LUBRICATING OIL, SPEC VV-L-800.
4. TO WORK IN-----.370 IN. (MIN) DIA BORE.
5. TO WORK OVER-----.186 IN. (MAX) DIA ROD.

OUTSIDE DIA SOLID, NOT MORE THAN _____ .310
 INSIDE DIA FREE, NOT LESS THAN _____ .227
 ASSEMBLED HEIGHT BASIC _____
 LOAD AT ASSEMBLED HEIGHT _____
 SOLID HEIGHT, NOT MORE THAN _____ .190
 DIA OF WIRE (APPROX) _____ .032
 FREE HEIGHT (APPROX) _____ .500
 NUMBER OF COILS (APPROX) _____ 6
 DIRECTION OF COILING _____ OPTIONAL
 ENDS CLOSED AND GROUND FLAT
 OPERATING HEIGHT BASIC _____ .250
 LOAD AT OPERATING HEIGHT _____ 4.9 ± .5 LBS
 SPRING RATE (REF) _____ 19.7 LBS/IN
 MANUFACTURE IN ACCORDANCE WITH MIL-S-13572, TYPE I, GRADE B.

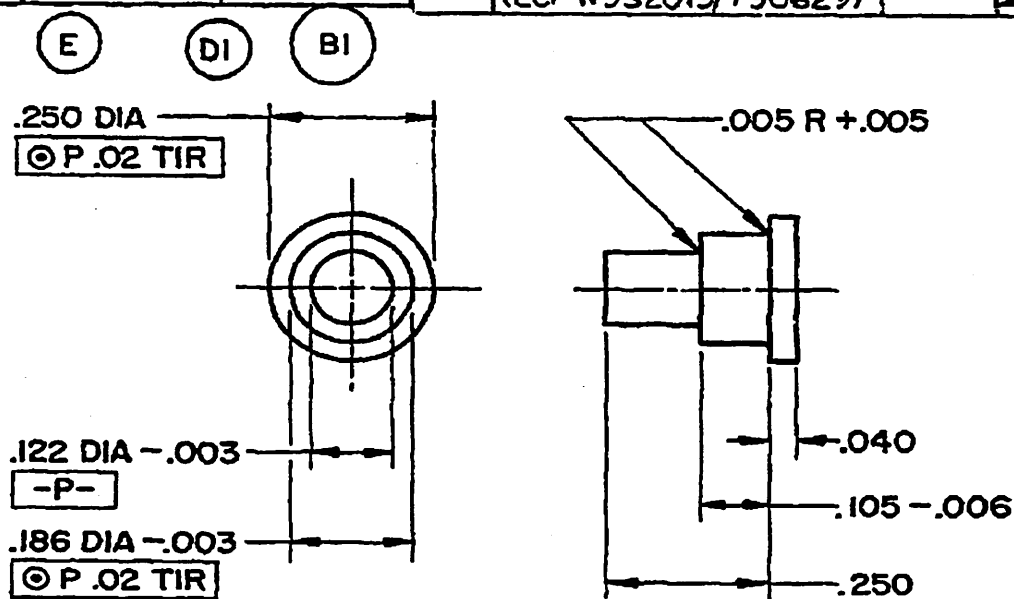
REVISIONS				
MF	ZONE	LTR	DESCRIPTION	DATE
		D	REDRAWN & REVISED W/CHANGE SEE EO 82000	5 FEB 68

(USED WITH DETENT-7790008)

PART NO. 7790046

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING 15 JAN 58		DEPT OF THE ARMY ROCK ISLAND ARSENAL ROCK ISLAND. ILL 61201	
YP		TOLERANCES ON DECIMALS XX ±		DRAFTSMAN WJG	CHECKER EGW	SPRING, HELICAL	
TS		ANGLES ± XXX ±		TRACER <i>W. J. Wilson</i>	CHECKER <i>W. J. Wilson</i>		
EL 2		MATERIAL		ENGINEER <i>W. J. Wilson</i>	DESIGNER <i>W. J. Wilson</i>		
RA	F7790600	LAUNCHER, M79	SEE NOTE 1	SUBMITTED <i>Philip E. Heberle</i>		DWG SIZE B	CODE IDENT NO. 19204
BH		NEXT ASSY.	USED ON	APPROVED		7790046	
RH		APPLICATION		SEE NOTE 3		SCALE	UNIT WT
						SHEET	OF

PHYSICAL PROPERTIES		DO NOT -99-		APPLY PART NO. -AS-SPECIFIED-		REVISIONS			
YP		APPLICATION				SYM	DESCRIPTION	DATE	APPROVAL
TS		NEXT ASSY		USED ON		A	REDRAWN & REVISED SEE EO NO. 25395	16 OCT 59	W Grant
EL2		SEE ENGRG RECORDS				B	(1-2) SEE EO NO. SA27673	30 NOV 64	Grant
RA		C7790613		LAUNCHER		C	(1) SEE EO NO. SA29433	22 JUL 66	Grant
BH				M79		D	(1-2) SEE EO 82000	5 FEB 68	P. Schuler
						E	(2) SEE ERR HQR 10818	30 JUL 71	E Winter
RH						F	ERR Z9Z1175AK (ECP W9S2019/790629)	890913	SYB



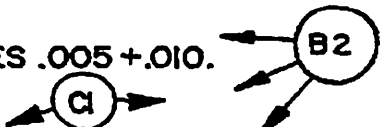
NOTES:

MIL-W-13855 APPLIES.

(E)

FINISH 125/

BREAK EDGES .005 +.010.



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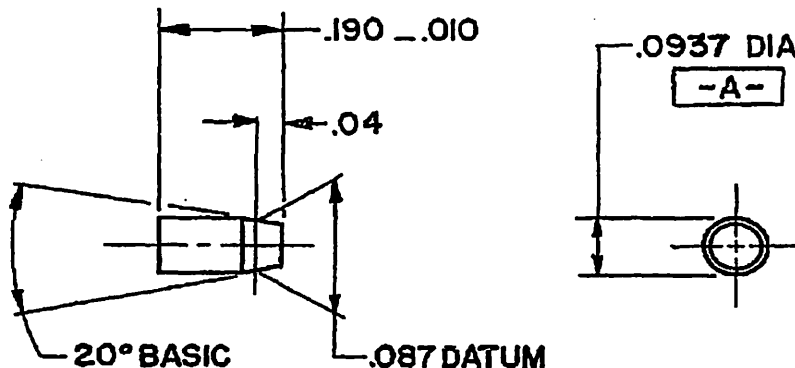
CODE IDENT NO. 19205

PART NO. 7790033

UNLESS OTHERWISE SPECIFIED	ORIGINAL DATE OF DRAWING 24 FEB 58	RIVET, TRIGGER GUARD	SPRINGFIELD ARMORY SPRINGFIELD, MA 01101
DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ±.010	DRAFTSMAN <i>EGW</i> CHECKER <i>EGW</i>		
MATERIAL STEEL CARBON, ASTM A108 1010, 1015	TRACER <i>EGW</i> CHECKER <i>RR</i>		
HEAT TREATMENT	DRGR <i>EGW</i> SUBMITTED <i>W. W. Grant</i> ORD CORPS		
FINAL PROTECTIVE FINISH FINISH NO. 5.3.1.2 OF MIL-STD-171	APPROVED BY ORDER OF THE CHIEF OF ORDNANCE <i>H. J. Lynch</i> ORD CORPS	SCALE 4/1	DWG SIZE A
		UNIT WT	7790033 SHEET 1 OF 1

NOTICE.—When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications or other data is not to be regarded by implication or otherwise as in any manner endorsing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

PHYSICAL PROPERTIES		DO NOT -B8-	APPLY PART NO. -A8-SPECIFIED-	REVISIONS			
YP	TS	APPLICATION		SYM	DESCRIPTION	DATE	APPROVAL
		NEXT ASSY	USED ON	A2	SEE E O NO. SA-25395	16OCT59	<i>Shant</i>
EL2		SEE ENGRG RECORDS		B	(1-2) SEE E O NO. SA27673	30NOV64	<i>Shant</i>
RA		B7790008 LAUNCHER		MIC	(1) SEE E O NO. SA29433	22JUL66	<i>Shant</i>
BH		M79		ED	(1-2) SEE E O 82000	5 FEB68	<i>P. Hebrich</i>
RH				E	ERR Z9Z1175AK (ECP W9S2019/790629)	890913	<i>EGW</i>



MIL-W-13855 APPLIES
TOLERANCE AND FINISH ON DIMENSION
SHALL BE CONTROLLED TO INSURE
SATISFACTORY BRAZING FIT WITH
PLUNGER -7790009

-A-

CURRENT DESIGN ACTIVITY CAGE CODE 19200
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PICATINNY ARSENAL, NEW JERSEY 07806-5000

125/
✓ EXCEPT AS NOTED
BREAK EDGES .005 ±.010

B2

CODE IDENT NO. 19205

CI

A

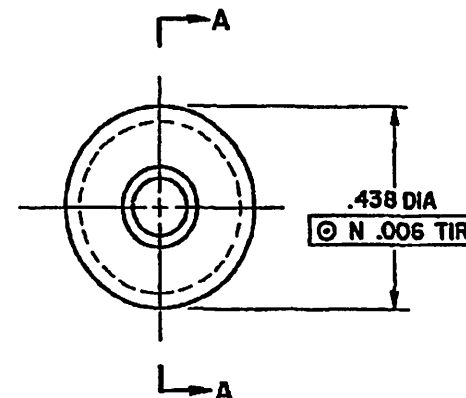
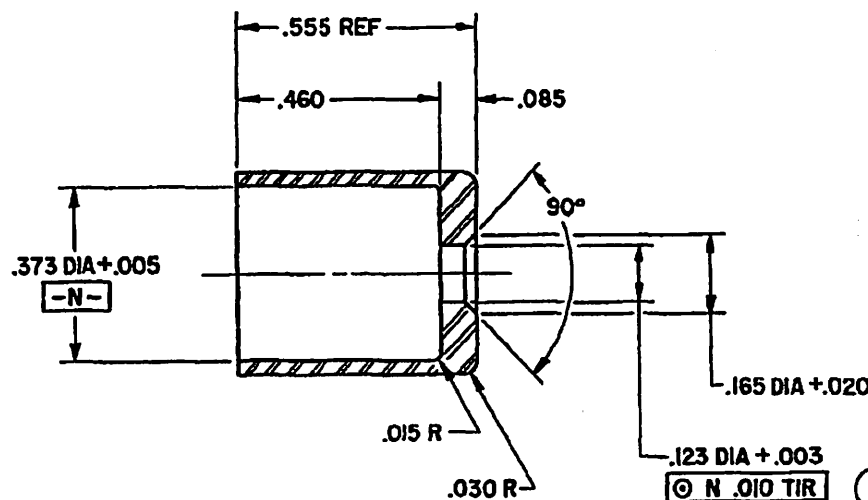
PART NO. 7790027

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES ± .01	ORIGINAL DATE OF DRAWING 24 FEB 58	PIN, DETENT	SPRINGFIELD ARMORY SPRINGFIELD, MA 01101
	DRAFTSMAN <i>CAP</i> CHECKER <i>EGW</i> TRACER <i>CAP</i> CHECKER <i>ROK</i> ENGR <i>REAR</i> <i>MD</i> SUBMITTED <i>VA Frankkonen</i> ORD CORPS		
MATERIAL STEEL, CARBON, SPEC QQ-S-637: 1137, 1141	APPROVED BY ORDER OF THE CHIEF OF ORDNANCE <i>A. F. Lynch</i> ORD CORPS	SCALE 4/1	DWG SIZE A
HEAT TREATMENT		UNIT WT	7790027
FINAL PROTECTIVE FINISH			SHEET 1 OF 1

NOTES:—When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely stated Government procurement operation, the United States Government hereby incurs no responsibility for any damages whatsoever; and the fact that the Government may have furnished, furnished, or in any way assisted the said drawings, specifications or other data is not to be regarded by implication or otherwise as in any manner favoring the holder or any other person or corporation, or assuming any duty or obligation to manufacturers, user, or any other person in connection therewith in any way to related damage.

91006728

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
A1	SEE EO NO. SA-25395	16 OCT 58	<i>[Signature]</i>
B	(1-4) SEE EO NO. SA 27673	30 NOV 64	<i>[Signature]</i>
C	(1) SEE EO NO. SA 29433	22 JUL 66	<i>[Signature]</i>
D	(1-2) SEE EO-82000	5 FEB 68	<i>[Signature]</i>
E	ERR Z9Z 1175AK (EC ² WPS2012/730629)	23 OCT 13	<i>[Signature]</i>



CURRENT DESIGN ACTIVITY CAGE CODE 19200
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PICATINNY ARSENAL, NEW JERSEY 07806-5000

FINISH ALL OVER $\sqrt{125}$
BREAK EDGES .005+.005

(A) (B1) (D1) (B2) (C1) (B4) CODE IDENT NO. 19205 (D2)
PART NO. 7790016

F7790600 LAUNCHER, M 79		PHYSICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING 24 FEB 58		HOUSING, DETENT SPRING		SPRINGFIELD ARMORY SPRINGFIELD, MA 01101	
		TP		DIMENSIONS ARE IN INCHES		DRAFTSMAN <i>[Signature]</i> CHECKER <i>[Signature]</i>					
		TS		TOLERANCES ON FRACTIONS DECIMALS ANGLES $\pm 1^\circ$		THROU <i>[Signature]</i> CHECKER <i>[Signature]</i>					
		ELI		MATERIAL STEEL, FED. SPEC QQ-S-6371 1117, 1118		ENGR <i>[Signature]</i> DTD <i>[Signature]</i>					
SEE ENGRG RECORDS		RA		HEAT TREATMENT		SUBMITTED <i>[Signature]</i>		SCALE 4/1		UNIT WT	
NEXT ASSY USED ON		BH		FINAL PROTECTIVE FINISH		EGW					
APPLICATION		RN		FINISH NO. 5.3.12 OF MIL-STD-171		APPROVED BY ORDER OF THE CHIEF OF ARMY		B		7790016	
DO NOT		APPLY PART NO.				SHEET 1		OF 1			

B7790008

BRAZE IN ACCORDANCE
WITH MIL-B-7883
SEE NOTE 2, OR WELD
IN ACCORDANCE WITH
MIL-STD-1261
CLASS I

(G)

(E1)

(D1)

PIN - 7790027

(F1)

PLUNGER - 7790009

(G)

(E2)

NOTES:

1. TEST FOR BRAZED OR WELDED JOINT:
JOINT BETWEEN PLUNGER AND PIN SHALL
WITHSTAND A 400 POUND AXIAL LOAD,
GRADUALLY APPLIED, WITHOUT RUPTURE

2. BRAZING MATERIAL:
BRAZING ALLOY, SPEC QQ-B-650:
COMPOSITION FS-BCu.

(A)(C)

3. HEAT TREATMENT:
HEAT AT 1540° TO 1565° F. QUENCH IN OIL. TEMPER
30 MINUTES AT HEAT TO HARDNESS SPECIFIED.

HEAT TREATMENT METHOD IS FOR
GUIDANCE ONLY EXCEPT TEMPERING
TIME SHALL NOT BE REDUCED BELOW
THAT SPECIFIED.

4. FINAL PROTECTIVE FINISH:
FINISH 5.3.1.2 OF MIL-STD-171,
AFTER ASSEMBLY.

(F2)

(D2)

(C)

CODE IDENT NO. 19205

CURRENT DESIGN ACTIVITY CASE CODE 19200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07806-5000

FOR LIST OF PARTS, SEE
ENGINEERING PARTS LIST-7790008

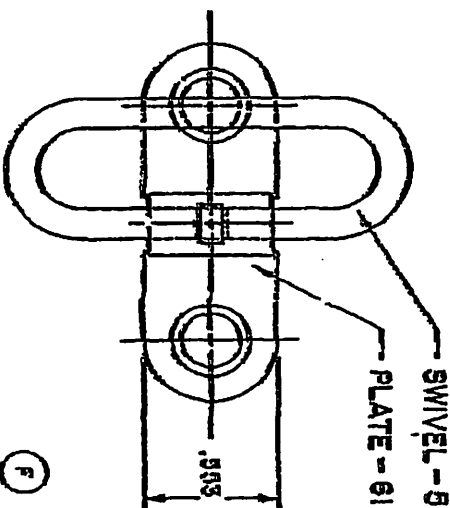
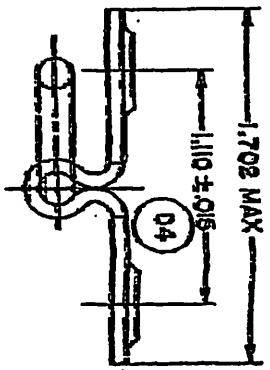
PART NO. 7790008

<p>(B)</p> <p>F7790600 LAUNCHER M79</p> <p>SEE ENGRG RECORDS</p> <p>NEXT APT. USED ON</p> <p>APPLICATION</p> <p>DO NOT APPLY PART NO. AS SPECIFIED</p>		<p>PHYSICAL PROPERTIES</p> <p>TP</p> <p>TS</p> <p>ELS</p> <p>RA</p> <p>SH</p> <p>RH</p>		<p>UNLESS OTHERWISE SPECIFIED</p> <p>DIMENSIONS ARE IN INCHES</p> <p>TOLERANCES OR FRACTIONS DECIMALS ANGLES</p> <p>— .005 —</p> <p>MATERIAL</p> <p>HEAT TREATMENT</p> <p>SEE NOTE</p> <p>FINAL PROTECTIVE FINISH</p> <p>SEE NOTE 4</p>		<p>ORIGINAL DATE OF DRAWING 24 FEB 58</p> <p>DESIGNED BY EGC</p> <p>TRACED BY EGC</p> <p>CHECKED BY EGC</p> <p>APPROVED BY EGC</p> <p>SCALE 4/1</p> <p>UNIT WT</p>		<p>DETENT ASSEMBLY</p>		<p>SPRINGFIELD ARMORY</p> <p>SPRINGFIELD, MA 01101</p>	
		<p>C30-35</p>		<p>APPROVED BY EGC</p> <p>SCALE 4/1</p> <p>UNIT WT</p>		<p>7790008</p> <p>SHCET 1 OF 1</p>		<p>7790008</p> <p>SHCET 1 OF 1</p>			

127419B

REVISION

REV	DESCRIPTION	DATE	APPROVED
1	REWORK AND REWORK. SEE GO SA 24433	10-21-62	
2	REWORK AND REWORK. SEE GO SA 24433	10-21-62	
3	REWORK AND REWORK. SEE GO SA 24433	10-21-62	
4	REWORK AND REWORK. SEE GO SA 24433	10-21-62	
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DISTRIBUTION STATEMENT A:
"APPROVED FOR PUBLIC RELEASE;
DISTRIBUTION IS UNLIMITED."

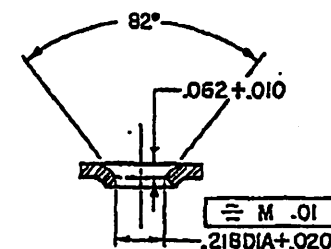
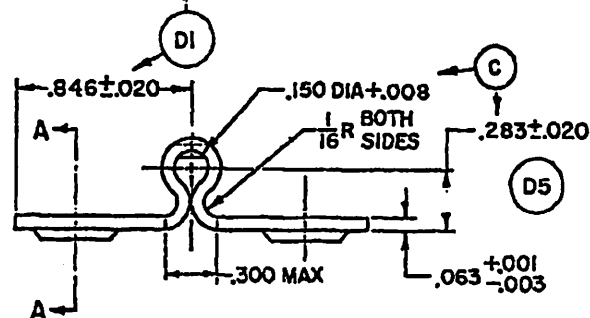
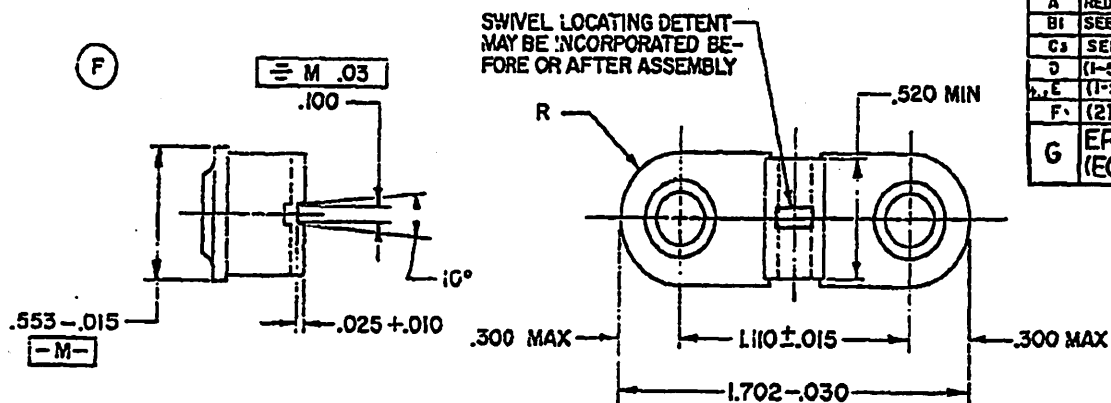
NOTES:

1. EXCEPT AS SPECIFIED OTHERWISE COMPONENT DRAWING DIMENSIONS SHALL APPLY TO THIS ASSEMBLY.
2. SWIVEL SHALL BE CAPABLE OF BEING ROTATED 180° WITH THE FINGERS. 03 LATERAL MOVEMENT IS PERMISSIBLE.
3. MIL-W-13885 APPLIES.

C11686409 SHOTGUN/ASA		PHYSICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE 30 APR 42		APPROVED BY 30 APR 42		CODE IDENT NO. 19208		6147721	
C	RIOT TYPE	TP		FUNCTIONS AND IN PARTS	ANGLES	DATE 30 APR 42	APPROVED BY 30 APR 42	DATE 30 APR 42	APPROVED BY 30 APR 42	DATE 30 APR 42	APPROVED BY 30 APR 42	DATE 30 APR 42	APPROVED BY 30 APR 42
B	LAUNCHER	TR		FUNCTIONS AND IN PARTS	ANGLES	DATE 30 APR 42	APPROVED BY 30 APR 42	DATE 30 APR 42	APPROVED BY 30 APR 42	DATE 30 APR 42	APPROVED BY 30 APR 42	DATE 30 APR 42	APPROVED BY 30 APR 42
F	D11010343 M79	TR		FUNCTIONS AND IN PARTS	ANGLES	DATE 30 APR 42	APPROVED BY 30 APR 42	DATE 30 APR 42	APPROVED BY 30 APR 42	DATE 30 APR 42	APPROVED BY 30 APR 42	DATE 30 APR 42	APPROVED BY 30 APR 42
D1		TR		FUNCTIONS AND IN PARTS	ANGLES	DATE 30 APR 42	APPROVED BY 30 APR 42	DATE 30 APR 42	APPROVED BY 30 APR 42	DATE 30 APR 42	APPROVED BY 30 APR 42	DATE 30 APR 42	APPROVED BY 30 APR 42
DO NOT APPLY PART NO.		APPLY PART NO.		FINAL PROTECTIVE FINISH		APPROVED BY 30 APR 42		APPROVED BY 30 APR 42		APPROVED BY 30 APR 42		APPROVED BY 30 APR 42	
DO NOT APPLY PART NO.		APPLY PART NO.		FINAL PROTECTIVE FINISH		APPROVED BY 30 APR 42		APPROVED BY 30 APR 42		APPROVED BY 30 APR 42		APPROVED BY 30 APR 42	

SCANNED FROM ORIGINAL

REVISIONS			
ITEM	DESCRIPTION	DATE	APPROVAL
2		21-30-94	
A	REDRAWN AND REVISED, SEE EO SA 24435	15 JAN 95	<i>[Signature]</i>
B1	SEE EO NO. SA 25395	16 OCT 95	<i>[Signature]</i>
C3	SEE EO- NO. SA 25915	23 NOV 95	<i>[Signature]</i>
D	(1-5) SEE EO NO. SA 27712	30 OCT 94	<i>[Signature]</i>
E	(1-2) SEE EO Q2000	5 FEB 96	<i>[Signature]</i>
F	(2) SEE ERR HQR 30602	8 JAN 73	<i>[Signature]</i>
G	ERR Z9Z1169B (ECP W9S2019/790629)	891016	ORD-CMT



SECTION A-A

5. BREAK EDGES .005+.015
6. MIL-W-13855 APPLIES.

COUNTRY OF ORIGIN		PHYSICAL PROPERTIES	
		YP	
	LAUNCHER,	TS	
86147721	M 79	ELI	
		RA	
		SH	
NEXT ASST	USED IN		
APPLICATION			
DO NOT	APPLY PART NO.		NMI
99-	-AS SPECIFIED		

UNLESS OTHERWISE SPECIFIED		
DIMENSIONS ARE IN INCHES		
TOLERANCES ON		
FRACTIONS	DECIMALS	ANGLES
$\pm 1/64$	$\pm .010$	$\pm 1^\circ$
MATERIAL		
SEE NOTE 3		
HEAT TREATMENT		
FINAL PROTECTIVE FINISH		
SEE NOTE 1		

ORIGINAL DATE OF DRAWING		30 APR 41	
DRAFTSMAN	REK	CHECKED	EGV
TRACED	H.E.K.	ORDERED	C.R.O.
DESIGN	R.E.A.	ENGINEER	N.W.G.
SUBMITTED			
N.W. GRANT			
ONE COPY			
APPROVED BY ORDER OF THE			
CHIEF OF THE OFFICE			
H.E. LYNCH			
ONE COPY			

PLATE,
SLING SWIVEL

CODE IDENT NO. 19205

SPRINGFIELD ARMORY,
SPRINGFIELD, MA
01101

DATE PAGE	6147716	
	SHEET	OF

SCALE 2/1

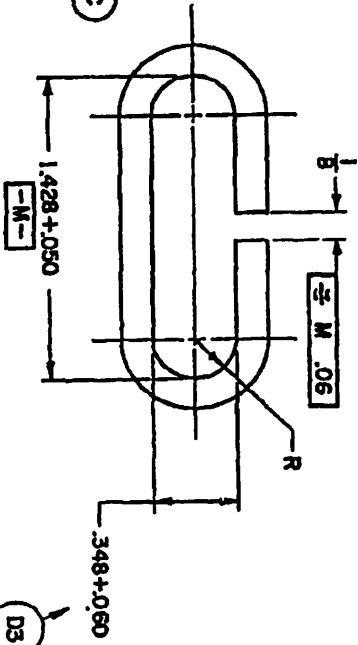
UNIT WT

SCANNED DUPLICATE ORIGINAL

6202515B

REV	DESCRIPTION	DATE	APPROVAL
2	REWORK AND REVISED SEE SA 24435	9-10-51	118-5
A	SEE EO NO. SA 25395	10-1-51	118-5
B	SEE EO NO. SA 25395	10-1-51	118-5
C	SEE EO NO. SA 25395	10-1-51	118-5
D	(1-3) SEE EO NO. SA 27712	10-1-51	118-5
E	(1-2) SEE EO NO. SA 29433	10-1-51	118-5
F	SEE EO RIA-14017	10-1-51	118-5
G	(1-2) SEE EO 82000	10-1-51	118-5
H	(2) SEE ERR HQR 30602	10-1-51	118-5
J	ERR 2921167B	10-1-51	118-5
	IECP W952019/7906271	891005	89A

NOTES:
1. FINAL PROTECTIVE FINISH:
FINISH 5.3.12 OF MIL-STD-171
2. DIMENSIONS APPLY AFTER ASSY
WITH PLATE B6147716



3. MATERIAL:
STEEL, SPEC ASTM A575 AND A675 OR ASTM A108;
1010, 1015, 1020, WIRE, STEEL, FED. SPEC Q&W-48;
1014, 1015, 1020, FINISH 1, TEMPER HARD OR ANNEALED-IN-PROCESS.

4. FINISH 125
5. MIL-W-13855 APPLIES.

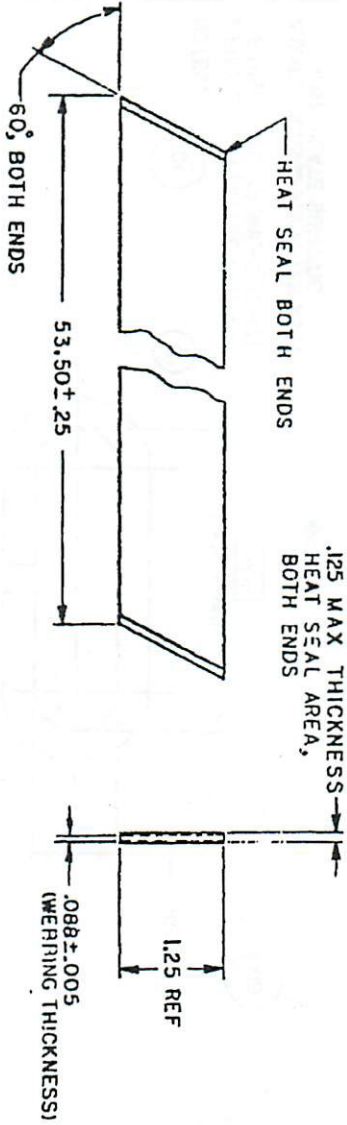
PROPERTY	UNLESS OTHERWISE SPECIFIED
TEMP	73
TENSILE	6147721
YIELD	M 79
ELONG	RA
HARDNESS	SEE NOTE 3
HEAT TREATMENT	SEE NOTE 3
FINISH	SEE NOTE 1

ORIGINAL DATE 31 DEC 41
APPROVED BY [Signature]
DATE 10-1-51
SCALE 2/1
CODE IDENT NO 19205
SWIVEL, SLING
SPRINGFIELD ARMORY,
SPRINGFIELD, MA.
01101
5153029
B
1 OF 1

CURRENT DESIGN ACTIVITY CASE CODE 815C
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICKAWAY AIRFIELD, NEW GENESE CITY 01600-0000

NOTES:-

MATERIAL:-
1-WEBBING, TEXTILE, BULKED NYLON, TYPE II, MIL-W-43668, EXCEPT AS NOTED,
COLOR BLACK, NO.37038 OF FED-STD-595.
2-MIL-W-13855 APPLIES.



REV	DESCRIPTION	DATE	APPROVAL
1	PRODUCTION RELEASE	860224	EGW
2	ERR W550107	871021	EGW
3	A NOR W652017/860507	871021	EGW
4	B NOR W652065/861222	890203	EGW
5	C NOR G159451/910425	910605	EGW

PART NO.12624562

STRAP

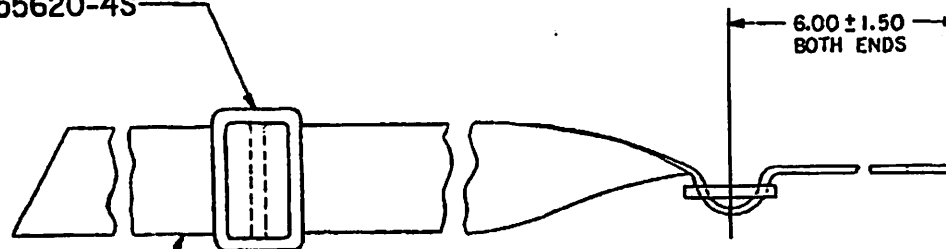
DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DIMENSIONS ARE: FRACTIONS ± ANGLES ± 3°		ORIGINAL DATE OF DRAWING 86-01-24		CHECKED EGW	
THIRD ANGLE PROJECTION		DRAWN RJD		OTHER EGW	
APPROVAL		DATE		SCALE	
FSCM NO. 19200		19200		12624562	
UNIT		INCH		SHEET	

NOTES:-
I-MIL-W-13855 APPLIES.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVAL
-	PRODUCTION RELEASE ERRWSS0107	86-01-24	gk gk
A	NORG159451/910429	910605	CHS SE P
B	NOR L7S2000 970214	970306	JB

2-LOOP-AA55620-4S

STRAP-I2624562



6.00 ± 1.50
BOTH ENDS

F8448600		RIFLE, ASSEMBLY, M16		F7265698		RIFLE, CAL. 30M		DO NOT SCALE DRAWING		ORIGINAL DATE OF DRAWING 86-01-24		U S ARMY ARMAMENT RESEARCH AND DEVELOPMENT CENTER DAVEN, NEW JERSEY 07801-5001			
F9349000		RIFLE, 556MM, M16A2		B8426167		LAUNCHER,		WHEN OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRAWN BY SAG		CHECKED BY EGW			
D7265648		SMG, M31M3A1				GRENADE,		TOLERANCES ON DECIMALS: FRACTIONS: ANGLES:		THIRD ANGLE PROJECTION		SLING, ADJUSTABLE, SMALL ARMS			
C11686409		SHOTGUN, 12GA,				M79		THIRD ANGLE PROJECTION		THIRD ANGLE PROJECTION		FSCM NO. 19200			
		RIFLE TYPE		F8448500		RIFLE,		THIRD ANGLE PROJECTION		THIRD ANGLE PROJECTION		12624561			
F7265694		CARBINE, CAL. 30				556MM		THIRD ANGLE PROJECTION		THIRD ANGLE PROJECTION		SCALE			
F7265696		M16M2				M16A1		THIRD ANGLE PROJECTION		THIRD ANGLE PROJECTION		UNIT WT.			
F7267000		RIFLE, 7.62MM, M14						THIRD ANGLE PROJECTION		THIRD ANGLE PROJECTION		SHEET			
NEXT ASSY		USED ON		NEXT ASSY		USED ON		THIRD ANGLE PROJECTION		THIRD ANGLE PROJECTION					
APPLICATION				APPLICATION				THIRD ANGLE PROJECTION				THIRD ANGLE PROJECTION			

11686532

116 86531

(Screw)

MECHANICAL PROPERTIES		APPLY PART NO.		REVISIONS			
YP		APPLICATION		LTR	DESCRIPTION	DATE	APPROVED
TS		NEXT ASSY	USED ON	A	(1) SEE EO 82000	5 FEB 68	<i>B. H. H.</i>
EL2		SEE ENGINEERING RECORDS		B	ERR Z9Z1118AM (ECP W9S2019/790627)	890816	<i>EIB.</i>
RA		C7791015	LAUNCHER	C	ERR Z9Z1306R (ECP GOS3067, 90-07-27)	91-03-13	EGW
BH			M79				
RH		E3269545	MK19,MOD3 40MM MG				

SEE MILITARY STANDARD MS 27183-5 FOR
DESCRIPTION OF THIS PART EXCEPT:

PROTECTIVE FINISH: FINISH 5.3.1.2 OR
5.3.2.2 OF MIL-STD-171.

CURRENT DESIGN ACTIVITY CAGE CODE 19200
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARSENAL, NEW JERSEY 07806-5000

(A)

USED WITH: SCREW-7791018

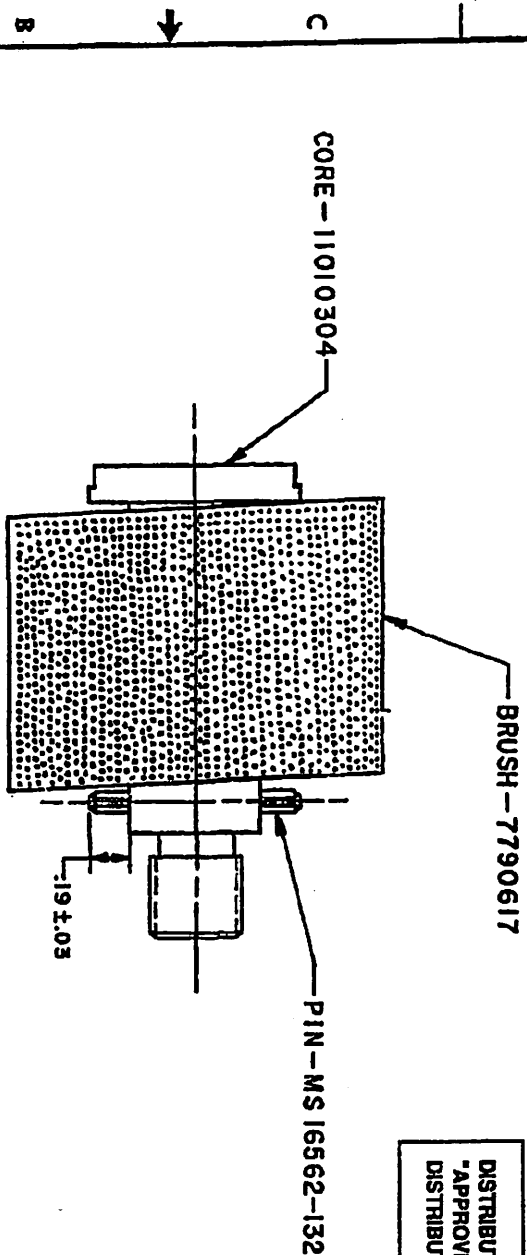
PART NO. 11010390

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING 30NOV64		SPRINGFIELD ARMORY, SPRINGFIELD, MASS. 01101	
TOLERANCES: ON FRACTIONS DECIMALS ANGLES + ± ±		DRAFTSMAN <i>CPS</i>	CHECKER		
		TRACER <i>CPS</i>	CHECKER <i>RSW</i>		
		ENGR. <i>RSW</i>	ENGR. <i>REAL</i>		
MATERIAL		SUBMITTED		WASHER, FLAT, ROUND	
HEAT TREATMENT		<i>W. G. ant</i>			
FINAL PROTECTIVE FINISH SEE ABOVE		APPROVED <i>W. G. ant</i>		DWG SIZE A	CODE IDENT NO. 19205 11010390
		SCALE —		UNIT WT	SHEET 1 OF 1

SWESP FORM NO. 1181-3
20 MAR 64 REV.

[illegible]

**DISTRIBUTION STATEMENT A:
"APPROVED FOR PUBLIC RELEASE:"
DISTRIBUTION IS UNLIMITED."**



**FOR LIST OF PARTS, DRAWINGS, AND SPECIFICATIONS,
SEE ENGINEERING PARTS LIST 11010305**

PART NO. 11010305

**U. S. ARMY
SPRINGFIELD ARMORY
SPRINGFIELD, MASS. 01101**

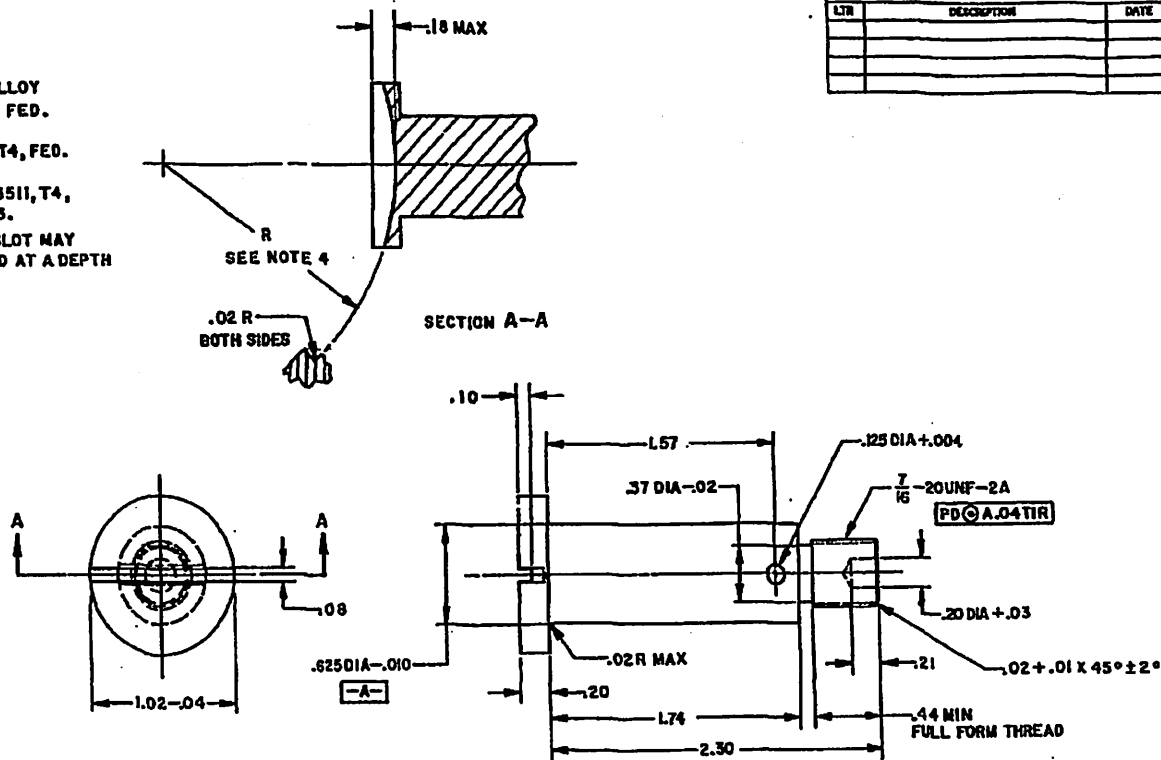
BRUSH ASSEMBLY,

[illegible]

**SWEST FORM NO. 1176-1
20 MAR 64 REV.**

NOTES:

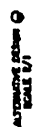
1. FINISH 125/
2. BREAK EDGES .005+.010.
3. MATERIAL: ALUMINUM ALLOY
2011, TEMPER T3 OR T8 FED.
SPEC QQ-A-228/3;
2024, TEMPER T351 OR T4, FED.
SPEC QQ-A-225/6;
2024 TEMPER T3510, T3511, T4,
FED. SPEC QQ-A-200/3.
4. ALTERNATIVE DESIGN: SLOT MAY
BE MILLED ACROSS HEAD AT A DEPTH
OF .18.



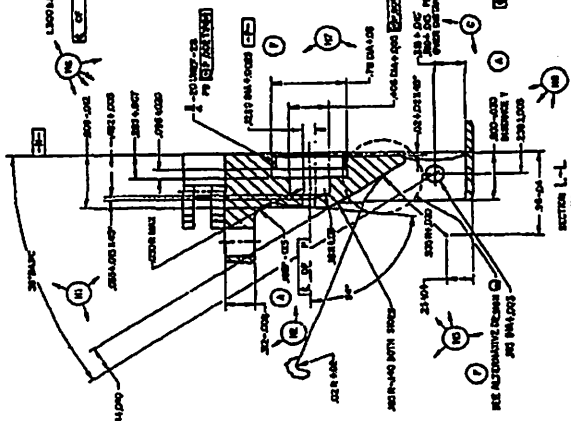
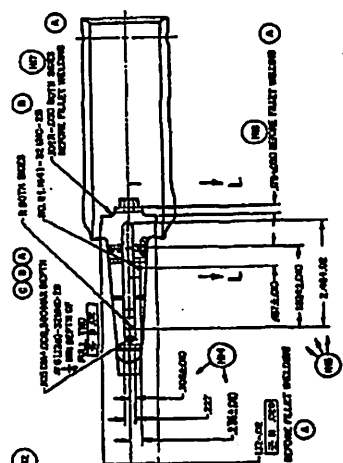
DISTRIBUTION STATEMENT A:
"APPROVED FOR PUBLIC RELEASE:
DISTRIBUTION IS UNLIMITED."

PART NO. 11010304

MECHANICAL PROPERTIES		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		ORIGINAL DATE OF DRAWING 8 SEP 64		U. S. ARMY SPRINGFIELD ARMORY SPRINGFIELD, MASS. 01101	
YP		TOLERANCES ON FRACTIONS =	DECIMALS = .01	DESIGNER	CHECKER	CORE, 40MM BRUSH	
TS		ANGLES =		TRACER	CHECKER		
EL 2				ORIGINAL	CHECKER		
RA	11010305 40MM	MATERIAL SEE NOTE 3		SUBMITTED			
BH	SEE ENGINEERING RECORDS	HEAT TREATMENT		APPROVED		PART SIZE CODE IDENT NO.	
RH	APPLY PART NO.	FINAL PROTECTIVE FINISH		VW Hunt		C 19205	
				VW Hunt		SCALE 2/1 UNIT WT SHEET 1 OF 1	



RECEIVER		DATE REC'D	
F	7790640	NOV 1984	014
SPENCER FIELD ARMORY SPENCERFIELD, MA 01104			

[illegible]

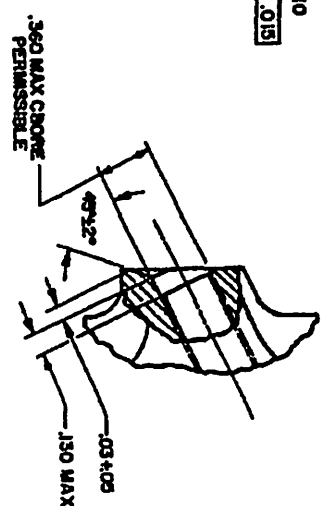
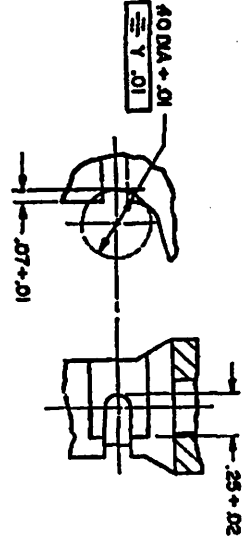
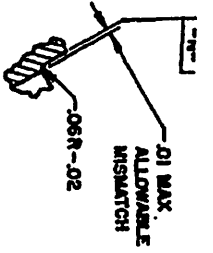
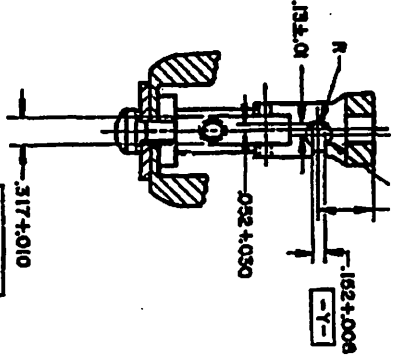
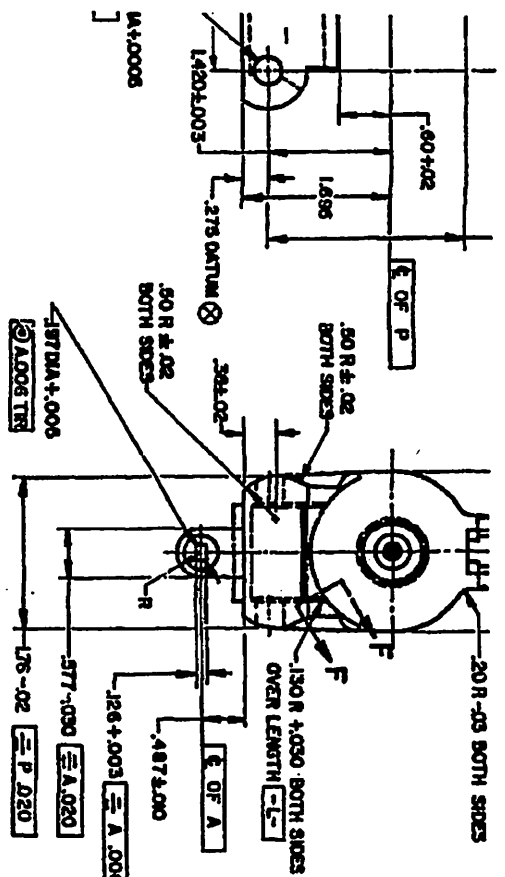
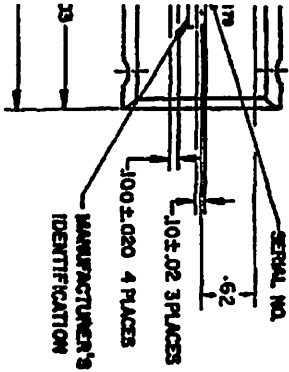
SECTION 2-1
SECTION 2-1



2



BAR CODE LOCATION
1 CODE WEAPON SERIAL NUMBER
ENTRICATION PLATE LOCATION
SEE NOTE #71



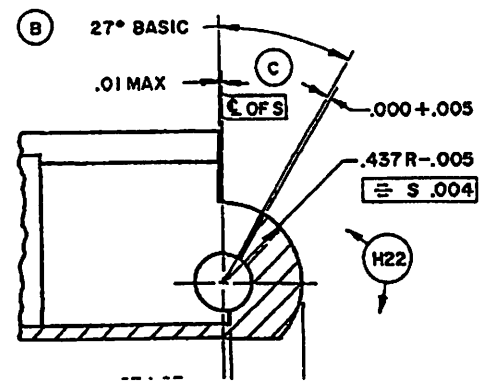
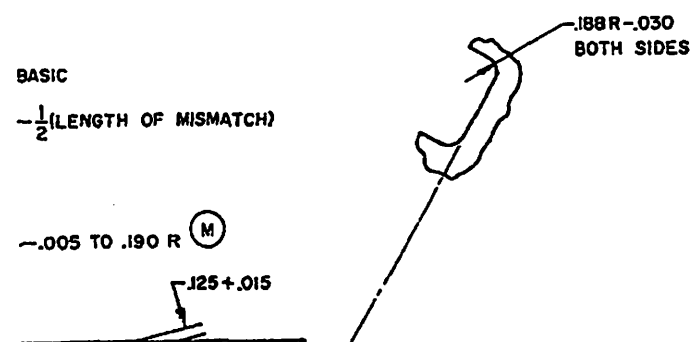
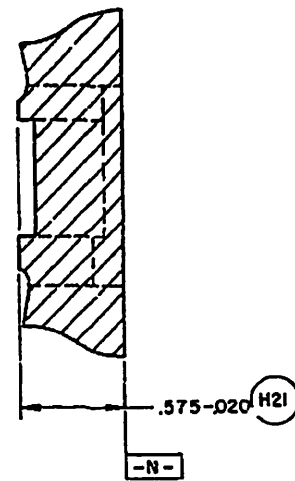
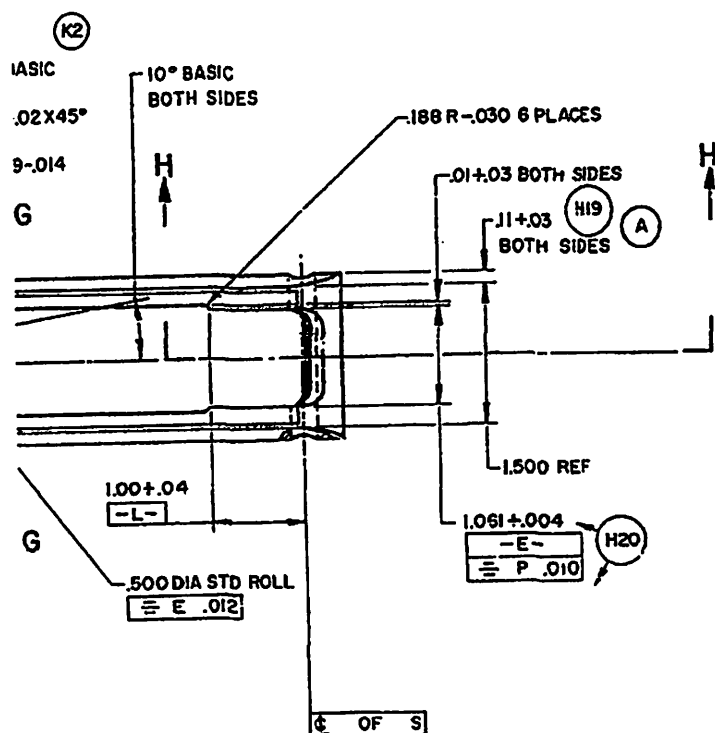
ALTERNATIVE METHOD OF MANUFACTURE

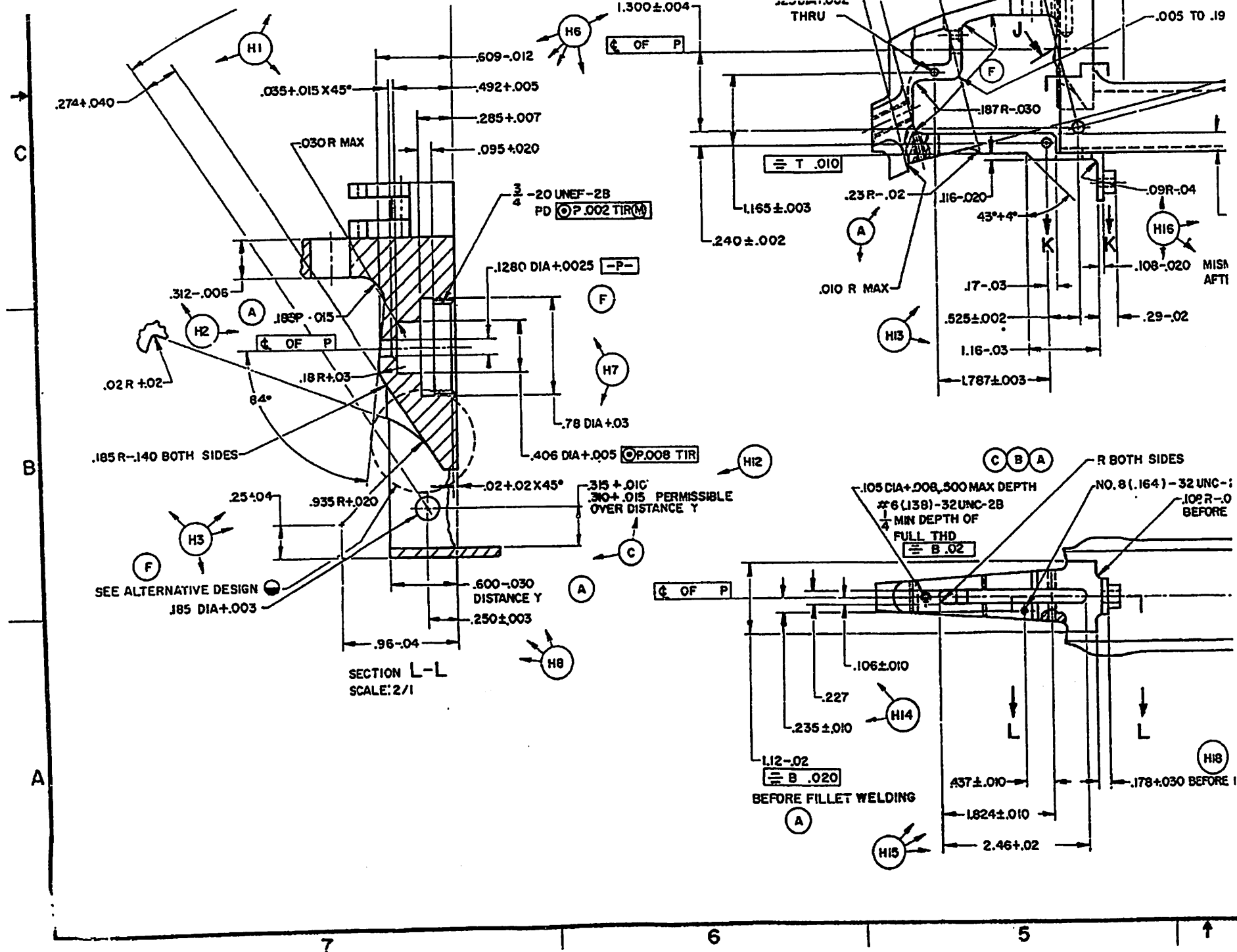
SCALE 2/1

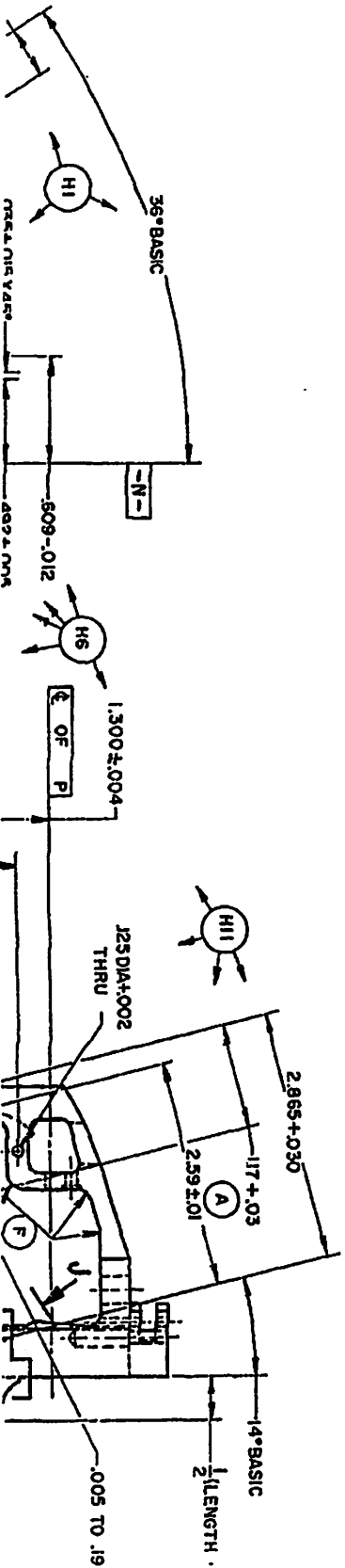
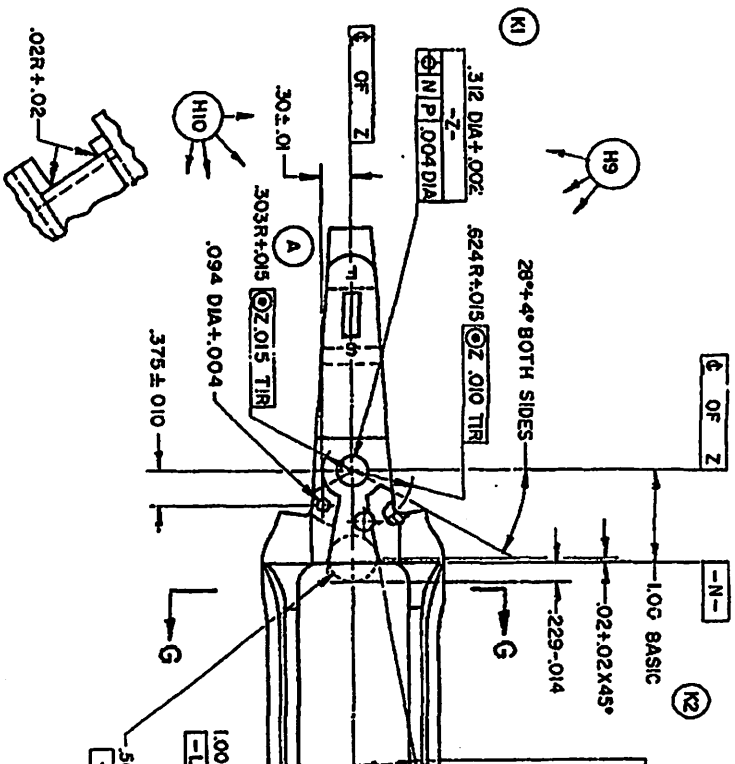
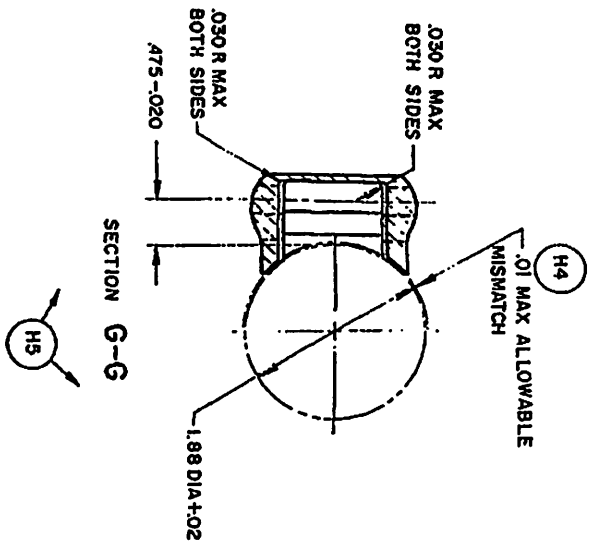
REV STATUS OF SHEETS		
N	P	REV
2	1	SHT

CURRENT DESIGN ACTIVITY CASE CODE 18300
U.S. ARMY
ARMAMENT RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
PICATINNY ARMOUL, NEW JERSEY 07804-5000

APPLICATION		MECHANICAL PROPERTIES		DO NOT SCALE DRAWING		ORIGINAL DATE OF DRAWING		SPRINGFIELD ARMOY, SPRINGFIELD, MA	
F7780600		LAUNCHER:		TOLERANCES ON DECIMALS = .006		18 JAN 60		RECEIVER	
NEXT ASSY		USED ON		TOLERANCES ON ANGLES = 1/4 ANGLES @ 90°		CHANGED TO			
M 79		M 79		THIRD ANGLE PROJECTION		E.O. R.		7790640	
G20 TO 38		G20 TO 38		E.O. R.		G.O.D.			
APPROVED		APPROVED		E.O. R.		E.O. R.		F 18205	
E.J. MASSA		E.J. MASSA		E.O. R.		E.O. R.			
SCALE 1/1		UNIT WT.		SHEET 1 OF 2		SHEET 1 OF 2			







NOTES:

1. FINISH 129/
2. BREAK EDGES .008 & .015 UNLESS OTHERWISE SPECIFIED.
3. HEAT TREATMENT (FINAL):
HEAT AT 1830°F TO 1600°F, QUENCH IN CIRCULATING OIL, TEMPER 1 HOUR MIN TO HARDNESS SPECIFIED.
4. NORMALIZE FORGINGS OR BLANKS FOR HARDENING. HEAT AT 1800°F TO 1700°F, COOL IN STILL AIR.
5. WELDING REQUIREMENTS:
A. AREAS TO BE WELDED SHALL BE PRE-HEATED AT 450°F MIN IMMEDIATELY PRIOR TO WELDING.
B. ELECTRIC ARC WELD IN ACCORDANCE WITH MIL-W-8611, COVERED ELECTRODE OR INERT GAS SHIELDED PROCESS. FILLER METAL SHALL BE TYPE HT-4130, SPEC MIL-E-8697 OR 4130 STEEL (BAKE WIRE) AS REQUIRED BY PROCESS.
C. STRESS RELIEVE FOR ONE HOUR AT 850° TO 900°F AFTER WELDING.
6. MAGNETIC PARTICLE INSPECT (WET PROCESS) FOR CRACKS IN ACCORDANCE WITH MIL-I-6968 USING CIRCULAR AND LONGITUDINAL, MAGNETIZATION AT A CURRENT OF 800 TO 1000 AMPERES, D.C.
7. HEAT TREATMENT METHOD IS FOR GUIDANCE EXCEPT THAT TIME AT TEMPERATURE SHALL NOT BE REDUCED BELOW THAT SPECIFIED.
8. DIMENSIONS MARKED \otimes ESTABLISH ANGULAR RELATIONSHIP OF RECEIVER FOR ESTABLISHING DIMENSIONS FROM HOLES $\begin{bmatrix} -S \end{bmatrix}$ AND $\begin{bmatrix} -P \end{bmatrix}$.
9. MIL-W-13895 APPLIES.
10. MATERIAL:
STEEL, CR-MO SPEC MIL-8-4-68: 4130
STEEL, ALLOY, S785 ASIN A304, A322, A331: 4130.
11. APPLY BAR CODE LABEL IN ACCORDANCE WITH TECHNICAL PURCHASE DESCRIPTION / SPECIFICATION-UIS, ARMY SMALL ARMS WEAPON LABEL.
12. FINAL PROTECTION FINISH
FINISH NO. 5.5.12 OF
MIL-STD-171.

